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## COMMUNICATIONS.

### LAPAROTOMY WITH EXCISION OF A PORTION OF THE ILEUM.

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A large fleshy woman was admitted into the University Hospital, suffering from strangulated umbilical hernia. The tumor was one of considerable magnitude, and had existed for several years, the contents being only partially reducible. She had been seen by two excellent physicians, Drs. Smock and Hughes, before her admission, who had applied the taxis, but without success. When examined by me, the swelling was resonant and flat at different points on percussion, revealing the mixed character of its contents—that is, both intestinal and omental. The vomiting was severe, stercoraceous in character, with threatening collapse of the system. After etherization, a few minutes were employed in a renewal of taxis, but without any favorable result, when a resort was at once had to herniotomy. The overlying layers of tissue being incised, the seat of stricture was sought for at the upper angle of the wound, detected, and divided. The intestine was found to be inky black, and oozing from its surface was a bloody serum. The omentum was greatly thickened by interstitial deposits, by long residence outside of the abdomen, and was really unfitted for being replaced. After waiting a short time to see if the relief of the constriction would change the appearance of the contents, and finding no alteration, I removed the mass of omentum, and

excised fourteen inches of the disorganized bowel with a corresponding part of the mesentery, divided in a V-shaped manner. The vessels being carefully tied, the cut ends of the intestine were now brought together, and united by a series of Lembert silk sutures, extending round the entire circumference of the wound, and placed at a distance less than one-eighth of an inch apart; the depth of penetration of the stitches reached only to the mucous coat. The intestine was now returned into the abdomen, and the parietes closed by a number of interrupted sutures. The entire procedure was done under strict antiseptic methods. Though considerably shocked by the conjoined effects of the disease and the laparotomy, yet the woman reacted satisfactorily, and, in the evening of the day, was quite comfortable. On the afternoon of the following day, she was attacked by nausea and vomiting, threw up a large quantity of blood, and died.

At the autopsy, the ends of the intestine were found fairly well united, except at one point on the mesenteric surface, where one of the stitches had torn out, though no escape of fecal matter was discovered to have occurred. The source of the blood vomited was supposed to have come from the vessels at the seat of operation.

With the light daily accumulating in this department of surgery, it would have been better, instead of stitching together the ends of the intestine, to have brought them out of the external wound and to have attached the half circumference of each to the parietes, preparatory to another and a later operation for re-establishing the continuity of the intestinal canal. The time required for similar operations might be considerably

shortened by adopting the suggestion of a writer, whose name I cannot at this moment recall, viz: Instead of excising the V-shaped piece of the mesentery, to double the redundant portion of that structure on itself, keeping the two layers in contact by properly inserted stitches, and thus converting the two layers into one by an intermediate bond of lymph.

### EARLY OVARIOTOMY.

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In an able editorial in the MEDICAL AND SURGICAL REPORTER of August 11, 1888, the following paragraph occurs: "Dr. Sutton, in the REPORTER of June 2, 1888, forcibly insists upon this point (early ovariectomy); but, from the illustrative case which he reports, it might be inferred that the advantages consist in the ease and rapidity with which the operation can be done. A short operation unquestionably favors recovery, not only by the less amount of shock experienced, but by the smaller number of germs which gain access to the peritoneal cavity. Adhesions are much less apt to be encountered in cases operated upon early than in those in which operation has been deferred."

The first and second points—a short operation favors recovery and the less danger of encountering adhesions—are well taken and patent to every reader. But that a short operation is especially advantageous by reason that a smaller number of germs gain access to the peritoneal cavity is questionable, and not in accordance with my experience. Prior to 1881, like many of my countrymen, I was a disciple of Lister. After nearly two years' experience in the clinics of Europe, and long attendance upon the operations, public and private, of Keith, Tait, and Bantock, my faith in Listerism was broken. Nevertheless, it was a difficult matter to get rid of preconceived ideas upon the subject. At a meeting of the American Gynecological Society, held after my return from Europe, in the autumn of 1883, I read a paper entitled "Cleanliness in Surgical Operations," from which I repeat the following extracts: "Listerism seemed to be just the thing we all needed, and it was almost universally adopted. The object of this method was to destroy these germs, these micrococci, and these bacteria. But the microscope kept on keeping watch over the result, and detected micrococci under

the Lister dressings of carbolic acid; yet these wounds healed faultlessly—no pus, no inflammation. Further, living micrococci were found in 5 per cent. solutions of carbolic acid. Two things were now patent—that the presence of all micrococci in wounds did not prevent faultless healing, and that even a 5 per cent. solution of carbolic acid did not in a short time destroy all micrococci. The assertion that the germ theory was not entirely correct was now made; and further, that the antiseptic method failed to destroy all germs."

"Doubts once initiated, a war of arguments and statistics followed, and it was proved, if ever anything was proved, that surgery under Listerism, either entire or modified, was better than it had ever been before.

"The whole argument was based on the supposition that Listerism was carbolic acid, and carbolic acid Listerism. They seemed to forget the great details of cleanliness which the antiseptic method carried with it. They forgot the importance of wet instruments. The believers lauded Mr. Lister and carbolic acid *ad astra*. A few men, practical surgeons, ventured to experiment with Listerism. One, the late Professor von Bruns, ceased using the spray and substituted irrigation; the result was his celebrated enunciation: '*Fort mit der Spray*.' Dr. Thomas Keith had done so well with Listerism in ovariectomy that his results were looked upon as an overwhelming argument in favor of the germ theory of Pasteur and the germicide method of Mr. Lister. But Dr. Keith had this secret: septic poisoning had occurred in his cases in spite of Listerism. Moreover, he believed that one or two of his patients had died from carbolic-acid poisoning. In this view he was sustained by his able friend, Professor Hamilton, pathologist at Aberdeen. Dr. Keith dropped the spray, and proved, by one hundred cases of ovariectomy done without it, that his results were better than in one hundred cases done under it. Dr. Bantock systematically reduced the carbolic acid in the spray until he used only pure water; his results were lower temperatures after operations, and more favorable recoveries. As a result, he gave up the use of carbolic acid, both in the spray and in the pans. Mr. Lawson Tait fell into line with his Scotch colleagues, Keith and Bantock, and led the charge against the entire carbolic system; and these three great men have, so far as abdominal surgery goes, proved the worthlessness of the carbolic-acid-spray

feature of Listerism. All the details of cleanliness attached to the antiseptic method they believe in. Three things were now proved, viz.:

"1. All germs are not deleterious.

"2. Carbolic acid in five per cent. solution does not kill all germs.

"3. That the antiseptic method in abdominal surgery admits, with advantage, of modification."

"But, in matters of cleanliness, let every surgeon learn to be methodical and critical. He must keep always before him the fact that no system of antiseptics will cover dirty and slovenly surgery. There are many surgeons who now no longer use Listerism; but there is no successful surgeon of my acquaintance who neglects measures to insure cleanliness.

"All vessels used about operations should consist of glass or porcelain. Glass, by reason of its transparency, is the better. Porcelain, by reason of its pure white color, stands next. Next to these, brass forms the best material, as it admits of rough usage and can be scoured clean. The water used is better to be first boiled, and, if necessary, subsequently filtered. If the water-supply is from a dirty stream, care should be taken. Distilled water can be largely used when it can be distilled from the hospital machinery. For irrigation, cleansing of sponges and instruments, it may be carbolized. When it is possible in the operating-room, large tanks of pure water—medicated or not, as the operator desires—will be found advantageous. With tube and stop-cock, the supply of water is always ready and within perfect and easy control. Sponges are dangerous in surgery. Their innumerable crevices render them good receptacles for dirt of all sorts, solid or liquid or gaseous. They should never, after being prepared for an operation, lie about uncovered. After operation, it is not safe to trust the cleansing process to either a nurse or assistant. The surgeon should take care of his own sponges. Towels may be substituted for sponges. Kæberlé has not used a sponge in intra-abdominal work for nine years. Instruments should never be permitted to dry after being used until they are washed and dried by the attendants. Dry blood or pus is difficult of removal, and stains, suspicious at least, often remain behind. During an operation, they should be handled only by the operator and one person, who gives and takes them from him. The same may be said of ligatures and needles. If sponges are used, the fewer hands they pass through

the better. And all such exhibitions as a relay of nurses and assistants standing about warming sponges in their hands until called for is unsafe, untidy, and suggestive of a poor surgeon. After an operation, all instruments should be thoroughly cleansed; every pincet-point and every needle-eye should pass through a spirit-flame. Prior to the next operation, all the instruments should be again cleansed and scalded. Ligatures should be kept on reels, and always be submerged in an antiseptic fluid—five per cent. carbolic acid; or, prior to being used, be well scalded. Silk thus treated may always be left in the tissues. Boiling it for an hour, with or without carbolic acid in the water, renders it perfect for all purposes. No other ligature is any better, and none good is so cheap. Assistants should be impressed with the necessity of having clean clothing and clean hands, and it is always well for both operator, assistants, and nurses to wash their hands and forearms well in turpentine, and afterward in a solution of washing-soda. A basin of clean, warm, carbolized water should stand by the side of the operator, in which he may at any time rinse off his hands.

"No hospital assistant is a safe man if he is careless personally or permits those under him to be so.

"From all intra-abdominal operations, menstruating nurses should be excluded, and all nurses present should be scrupulously clean as to hands and clothing. They should receive sponges from the operator and his assistant only upon plates, and convey them thus to and from the nurse who washes them. All surgical dressings should be kept in covered glass jars or tight tin cans, and never be exposed unnecessarily, and they should be in the care of one person accountable for their condition. Absolute cleanliness of a patient's apartments and bed is a long-established necessity. When the operation is intra-peritoneal, greater safety will be found in as few assistants and spectators as possible.

"On the continent of Europe, Listerism, and the cleanliness accompanying, is seen everywhere. It is modified as to spray by some operators. Thus, Billroth drops the latter during operation; so with Langenbeck and Volkmann. They all use irrigation extensively. Nussbaum, Schröder, Küster, and Martin are Listerists.

"The most careful antiseptic surgeon in Europe is Esmarch. He uses both spray and irrigation, and the peat dressing and decalcified bone drains of Neuber, his first assistant. The spray in Esmarch's clinic is

produced by a current of air instead of steam. Drainage is carried out carefully everywhere. With Esmarch and Neuber, the decalcified bone drain is used; with others, glass and rubber tubes. To secure freedom from infection, the tubes are kept, until used, in carbolized solutions."

Within one year after writing the above, carbolic acid was absolutely banished from all my intra-abdominal operations, and has remained so. Nor has any germicide been substituted in the sponge-water or instrument-bath. I had learned that carbolic acid produced congestion of the kidneys and higher temperatures, and that the patients did better without it. Moreover, I had seen ligatures boiled in a 5 per cent. solution of carbolic acid and placed upon the pedicle, and their application afterward followed by suppuration and then discharge through the abdominal wound.

Mr. Lawson Tait's experience I here append; a portion of his address before the Surgical Society of Ireland.

"1. The use of the spray, which I looked upon as by far the most important, since it covered the whole time of the operation, was absolutely consistent with the theory of the system, and seemed to me, from that point of view, of infinitely greater importance than all the other details put together.

"2. The preparation of sponges, ligatures, instruments, etc., previous to the operation.

"3. Details of occurrence during the operation, such as washing out the peritoneal cavity, etc.

"As carbolic acid is the substance to which Mr. Lister has consistently adhered throughout the whole of his work, and as it is that of almost universal acceptance, my remarks are to be taken as applying solely to it. I found, previous to this research, that the substance thymol, introduced by Mr. Spencer Wells, was too dangerous to be used, and the results of my research have seemed to me too conclusive to have any need for further experiment.

"In order to secure the complete performance of my research, I went to very great trouble about the apparatus, especially about the spray-producer. I had a very large one constructed, which would produce a continuous jet of spray six feet long, and having a base of nearly four feet in diameter, and this could be continuously maintained for about three hours. The spray used at first was from a solution of one in twenty, then one in thirty, then one in fifty, then one in eighty, then one in a hundred. I then

tried one in a thousand, and after that I went on with a spray consisting of nothing but steam and common tap-water, and my patients recovered as satisfactorily without the carbolic spray as with it; in fact, I may say that they recovered better without the carbolic acid, for, whilst using that substance in a strong spray, I had several indications of carbolic poisoning, and I very nearly lost one case. This was in the instance of a child, upon whom I operated for pelvic abscess under a spray of one in thirty. Within a few hours after the operation, her urine became quite black from indican, and loaded with albumen. She became unconscious, and finally had severe convulsions. Within forty-eight hours all these symptoms passed off, and she made a perfect recovery.

"At the beginning of my research, I had all my instruments completely covered in baths filled with a solution of carbolic acid—one in twenty—my sponges carefully cleansed and similarly covered, my ligatures scalded and soaked in the same solution for many hours before the operation, my hands and arms and those of my assistant carefully washed and rubbed over with the solution, and every preliminary detail most carefully carried out.

"Then, as with the spray, I slowly and at intervals reduced the strength of the solution, and finally I went through all the performances entirely without carbolic acid. In the same way with the details which came into use during the performance of the operation. Thus I used to sponge out the cavity of the abdomen with a solution of one in twenty, but now I use only tepid water, without carbolic acid at all; and, in cases where there is troublesome bleeding from separated adhesions, I pack the cavity with sponges—as many as twenty at a time—without any carbolic acid in them; or I wash out the cavity with two or three buckets of warm water poured in from a ewer, utterly regardless of germs in either air or water.

"This research occupied nearly two years, and all through that time I was carefully on the watch for either symptoms or results which would arrest me in my experiment, and show me that I was in error, and that I must retrace my steps and re-establish Listerism in my practice. But I found none, and, as all the details of my practice, up to the first of November last, have been published, I need not weary you with them now. Suffice it to say that, since the time when I may be said to have abandoned the practice of

Listerism, I have performed 107 completed operations for the removal of ovarian tumors; and of these there have been only three deaths, or a mortality of 2.8 per cent., besides a large number of other operations for removal of diseased ovaries and tubes, peritoneal and hepatic hydatids, tumors of the uterus and kidney—these having a mortality quite as satisfactory, and a success which has already attracted a wide attention.

"The only survivals of the Listerian method which I retain are the instrument and ligature baths. I keep all my instruments in baths of plain cold tap-water; and I scald all my ligatures in boiling water, before the operation, to get the gum out, and then keep them in cold water. You may ask Why do I keep to this? And I really can say nothing more than that I like to handle the things wet, and I think it prevents the formation of loose blood-clots. There certainly can be no question of germs about it, for the water must contain them in abundance; and I make not the slightest effort to destroy those I believe to be in the air.

"The conclusions I make, therefore, from my research are (1) that the germs which produce the putrefactive changes in dead tissue are harmless when admitted to the peritoneal cavity in the operations such as I perform upon it. The fatal cases of ovariectomy which I have seen since I gave up the use of carbolic acid—three in one hundred and seven operations—were due to the same cause, the production of heart-clot in cases which had been repeatedly tapped; and I believe that, if I were (not?) called upon to operate on cases which had been tapped, my mortality after ovariectomy would almost entirely disappear.

"2. The further conclusions are that none of the Listerian details, nor the system which they constitute in the aggregate, are at all necessary for the proper and safe performance of operations on the abdominal cavity; and that, on the whole, better, and even more, recoveries are made when no carbolic acid is used at all.

"At the International Medical Congress, after the evidence of Dr. Keith and myself upon the matter of the spray, Mr. Lister is reported to have said that possibly in ovariectomy the spray is not necessary. If this is to be accepted as the last utterances of antiseptic philosophy, I can only regard it as another illustration of its marvelous mutability.

"Not six months ago, ovariectomy was

quoted as the chief and greatest illustration of the wonders of Listerism; but it happens to be the only surgical area upon which a strict statistical inquiry can be made; and, when that is done, Listerism is found absolutely wanting. If germs are so potent in the case of a lumbar abscess, why do they prove so harmless in my cases of suppurating hæmatocele? If the serous cavity of the knee-joint is so susceptible to septic influences, how does the peritoneum escape? If you cannot remove a cyst of the back without the spray, how do I manage to do without it for a cyst of the belly? If Listerism is essential in removing a piece of dead bone, how is it I can freely dispense with it in removing a slough from the middle of the liver?

"I cannot pretend to answer these questions; they are for Mr. Lister and his disciples. All I can say is, that I do not think they can be answered upon the ground of the antiseptic theory.

"My own explanation of my success is in the direction of accumulated experience and an infinite care over every detail; and I am quite prepared to admit, and I have frequently admitted, that in this direction Mr. Lister's details have done a great deal of good. It yet remains to be proved whether or not an equal success might not be obtained for a series of amputations or excisions, if they were conducted, as my research was, by all the Listerian details being carried out with plain tap-water.

"I do not know, Mr. President, if my remarks fall upon my audience with anything like convincing force; but I am sure you will give me credit for the sincerity of my conclusions, and a desire that they should be dealt with at least as a tentative, perhaps a suggestive, effort.

"Nothing in surgery is final; and, even if the antiseptic theory and practice are all that is claimed for them, I can only urge that we have not yet got to the end of our tether, and that we have a great deal more to learn.

"What you may get out of my paper, I cannot say; but I have had at least this, an excuse for having one of my greatest treats—a visit to Dublin."

Dr. Bantock closes his admirable paper on "Hyperpyrexia after Listerian Ovariectomy" in the following words:

"It only remains for me to add that I have now proved that the claim that has been set up for Listerism cannot be sustained (in preventing pyrexia after operations); that carbolic acid may be introduced

into the circulation in poisonous quantity by means of this method; that when so introduced it manifests its presence by producing a state of hyperpyrexia, and that thus it actually produces too often what it was intended to prevent. And the practical result of all this, so far as I am personally concerned, is that, to meet the evil which to me is so formidable, I have gradually diluted my spray and solutions so as to reduce the whole question to one of *cleanliness*, which, after all, is the true secret and merit of Listerism, and I am happy to say with the effect of very greatly adding to the success of my ovariectomy work."

In a paper entitled "On Ovariectomy," by Dr. Thomas Keith, reprinted from the *American Practitioner*, and kindly sent me by my friend Dr. David Yandell, of Kentucky, I find the following remarks:

"At first our greatest success was with the weak solutions. Toward the end, we got to using the regular solution we use in everything—the five per cent. solution. I had not used this very long when I began to notice that the cases went on quite differently from what they had done before. The night after the operation, we had very often high temperature— $104^{\circ}$ ,  $105^{\circ}$ ,  $106^{\circ}$ , and once  $107^{\circ}$ . We had never had anything like that without antiseptics. In the entire two hundred and thirty cases I have referred to, in only two did the temperature rise to  $103^{\circ}$  the first night, and it never went to  $104^{\circ}$ ,  $105^{\circ}$ , or  $107^{\circ}$ . I noticed the difference, and wondered how it could be. I did not then think it was the absorption of the carbolic acid that did it, but I know now that it was. It was after seeing a paper by Bantock that that occurred to me. When I began operating in the theatre at the infirmary, I used the solution strong (Lister's strength), and frequently we had high temperatures in simple cases. In the first case, which was a simple case without adhesions, the temperature rose to  $105^{\circ}$  the first night. This was clearly traceable to the absorption of the carbolic acid. Then we began to have this rise frequently; so that there was a sort of general order left with the nurses to put on the ice-bag when the temperature rose to  $103^{\circ}$ , and often, on the first morning after operation when I came in, the ice-bag would be on. We had never had occasion to do this before. I recollect a nurse who had nursed about two hundred cases, had a patient one day with a high temperature, and I sent along some ice and an ice-bag, and she returned word that she did not know how to use them. I had forgotten that she

had never had to do with a high temperature. There is no doubt the carbolic acid raised the temperature the first night."

The first thing in Listerism to get its death-blow was the carbolic spray. Now, it went because it was either more dangerous than the germs in the atmosphere, or these germs were harmless. The latter proposition is always true, unless the operation is undertaken in an apartment recently poisoned by some infectious disease. And, in the event of the necessity arising to operate in such an apartment, it should be thoroughly disinfected with burning sulphur, and the patient should be spared the dangers of carbolic acid. Says Keith in the same article:

"Since I gave up the spray, I have not had any high temperatures—never anything like  $103^{\circ}$  in any case; seldom, indeed, has the temperature gone above  $100^{\circ}$ . The nurses were astonished at its not rising. I have put an ice-bag on but once since I quit the spray.

"I keep the sponges warm. Of course, I disinfect them in carbolic acid. After the first wash in soda and hot water, they are put into a one-in-twenty solution just before the operation. This is then washed out, and they are put into a solution of one in forty or sixty. Sometimes, however, it should be said, I put them in hot water alone.

"I use ligatures of silk and catgut—catgut for simple things. When I tie the pedicle, it is always with silk. I do not like to do it with catgut. I prepare my own catgut, because in getting it from the makers it is often rotten.

"For the external wound, I use silk for the deep sutures, and horsehair for the superficial sutures. I close the wound as perfectly as I can—as close as if it were a wound on the face. I do not look at it for a week, generally. It is then healed.

"I cover it with carbolized gauze, softened with glycerine, about one in eight, and over that a layer of cotton wool and a flannel bandage.

"I drain more cases now than when I operated under antiseptics. I became just a little timid, because it was an awkward thing giving up the spray."

Enough has now been said to prove that I have but little fear of the entrance of air into the peritoneal cavity. I aim at absolute cleanliness, and believe that, with the excellent hygienic surroundings of my private hospital, and with nurses long accustomed to making preparations for abdominal operations, and a growing experience in operating, that the safety of our patients is con-

served by keeping all chemicals out of their abdomens.

I have seen cases with long incisions, and protracted operations, when left dry and clean, make good recoveries. I have seen a pint of pus escape into the cavity of the peritoneum, and, after being well washed out with simple water, fail to produce a peritonitis. I have had the cavity full of gas from the intestines, and no harm come of it, and no chemical was used. The operator who succeeds best in tying all bleeding points, in washing out the cavity with clean water, and in judiciously using the drainage-tube, will, as a rule, obtain the best results possible. But the great plea for early ovariectomy, excepting in cases of intraligamentous cyst, is the avoidance of long incisions, perplexing adhesions, and the ruining of the health of the patient through the enormous growth of the tumor, or its possible malignancy or subsequent degeneration. Added to this are the dangers of accidents, among which are intestinal obstruction, the bursting of cysts, peritonitis, local or diffused, loss of blood into the cysts, twisting of the pedicle, gangrene or suppuration, and finally the possibility of pregnancy ensuing in the presence of a cyst.

After more than a dozen years of experience and study of these cases, I have yet to see the first woman die when the operation was done before she had been tapped.

The great advantage of early ovariectomy is a prompt and early recovery without damage to the woman.

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## THE PREVENTION OF EAR-DISEASE BY CARE IN CHILDHOOD.

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I begin with an obvious fact—the great value of perfect hearing, which, however, is rarely appreciated until it is lost or impaired. One then often suffers intensely, both mentally as well as physically. The frequent misunderstandings and embarrassments to which he is exposed are so discouraging and distressing that he withdraws into himself, and is considered stupid, and possibly finally becomes so. In fact, few physical defects are so powerful in curtailing a man's sphere of action. Numbers come to me feeling the incipency of this trouble, unconscious as to its causes, which, however, prove to be such as are very simple and easily avoided. It is truly remarkable,

when we consider how careless we are with our ears, that they are not more frequently defective. They are being continually exposed without a thought as to their care. This systematic neglect makes it all the more important that the causes of ear-trouble should be appreciated, so that something may be accomplished as to their prevention.

It is especially by proper care in childhood that much of the prevalent ear-disease and consequent deafness is to be avoided; for very frequently the foundation of the trouble is laid in childhood. In children, this organ is in its developing state, and is, in consequence, more liable to disease. This special liability makes it incumbent upon the family physician to acquaint himself with its condition in case anything should occur likely to involve it. It is at this period of life that very serious and chronic ear-troubles begin, troubles which may last throughout life, and be of permanent injury to the hearing. Even though it should not prove to be so severe, yet often at the threshold of manhood there is a consciousness of some deficiency—something restricts the possibilities and forms an additional obstacle in life's encounter. Again, we have slighter cases, which are yet very important. Where the tendency to ear-trouble has been created, the slightest indiscretion is followed by disturbance. It is peculiarly important that the methods of prevention should be impressed upon the family by the general practitioner, as evil results, with the often long and difficult treatment, are thereby avoided. If adult life is reached, and the ears are perfectly sound, we are fortunate, as with ordinary precautions they can almost invariably be kept so.

This paper was designed to call attention to the frequent neglect of the ears of children, when most of the preventive work must be done. Its truths are, however, applicable to all; in fact, it seemed an advantage to make it as general as possible, with the hope that more practical thought would be given to this often neglected branch of preventive medicine.

Poor general health is one of the most important factors in the causation of these cases, and is to be avoided, not for the sake of the ear alone, but for the good of every part of the body.

Colds are the most frequent of the causes of ear-disease. While many cases are occasioned directly by exposure to cold, in by far the majority of cases cold acts by first affecting the throat and nose. As soon as such a catarrh occurs, it is to be treated,

as otherwise it may affect the Eustachian tube and ear. Thickenings and chronic inflammations of the throat and nose almost invariably affect the ears, and require continued care. Should the ears become involved, they should be immediately treated to prevent advancement of the disease. Baring the head when perspiring is an especially common cause of ear-trouble. The hurry to the theatre or to board a car is often the occasion for this among men: the hat being removed either from necessity or for comfort, a slight draught accomplishes the result. A skull-cap would have prevented this. Even the somewhat frequent occurrence of having the hair cut much too close and the whiskers removed is often followed by inconvenience of this kind. When this occurs, the skin is to be washed with alum solution, and afterward well rubbed with a vegetable oil. The vigorous use of a fan is to be discontinued as soon as there is a feeling of stiffness of the neck, or pain or coolness in the mastoid region.

Wet feet, which so often occasion colds, are to be avoided by the use of stout shoes or by wearing good overshoes. The wet ankles obtained by women in rainy weather are to be prevented by having an impervious overdress reaching below the ankles, about two inches longer than the skirts, and by wearing, in addition, water-proof leggings.

Whenever we are liable, while perspiring, to be subjected to draughts of cold air, the wearing of woollens next to the skin is essential to prevention. Sleeping exposed to a draught from open windows or doors, and sudden changes of temperature during the night, is to be guarded against by having an extra blanket or quilt at the foot of the bed.

The low-neck and no-sleeve dress of women should be mentioned in this connection, and it is obvious at once how much harm it can occasion. Women, accustomed to ordinary apparel during the day, undress the upper part of the body for the evening hours, and it is rare indeed that some harm is not done. This mode of dress should be discontinued. The evening-dress of men, while by no means so frequently the cause of ear-trouble, must yet bear its share of blame. When it is worn, it should be over an extra or thicker undergarment.

Driving, by rapidly cooling the body, is sometimes the cause of ear-trouble. The driving-dress should invariably be heavier than the walking-dress. After public speaking or singing, upon going into the open air, a muffler or other neck-cover should be used to prevent evaporation from the neck region.

In winter, extra precautions to avoid cooling the neck and mastoid regions are necessary. A muffler or cape is often of value.

Thus far, draughts or exposure of some kind, causing colds, have been mentioned, and for the most part they can be avoided. When colds are present, it is necessary to realize their gravity. During the fevers of childhood, especially scarlet fever, measles, and diphtheria, the attendant inflammation of the throat is usually followed by either actual ear-disease or by weakness and liability to such disease. It is these diseases which give us the most severe of our cases—cases of deafness and very poor hearing, as well as of great destruction of the soft and bony structures of the ear. Much can be done in these fevers to ward off ear-trouble by proper treatment of the throat, the frequent cleansing of the nostrils and the supporting of the physical health; if this is not thoroughly attended to, trouble with the ear will be experienced. Careful prompt treatment will frequently prevent ear-disease and loss of hearing.

Syphilis is quite a frequent cause of ear-disease; patients suffering with it should be told of the necessity of great care. On the slightest evidence of any trouble with their ears, they should consult a physician. Tuberculosis is also a not infrequent cause, but, though by attention to the general health much can often be done to ward off ear-trouble, yet very frequently the ears will become affected.

Ears should be cleansed but rarely, and then with care. Hair-pins should never be used for this purpose; even ear-spoons frequently do harm. Cleansing of the meatus by water should be discountenanced, as the water remains in the ear and often occasions mischief; but, if it is used, the ear should afterward be thoroughly dried. Ear-cleansing is usually not necessary, as nature has, by the gradual expulsion of the wax, made the necessary provision for this. When nature fails, the physician alone should do the cleansing, and remove the accumulated wax.

Swimmers, to avoid the entrance of water, as well as of other foreign bodies, into the meatus, should put cotton in the ear. In addition, they should, when leaving the water, open the Eustachian tube by the effort at forcible inspiration, with the mouth and nose closed, and then, after lightly blowing the nose, force air into these tubes.

The blowing of the nose violently, especially when there is an acute catarrh of the throat or nose, is to be avoided. Proper cleansing of the nose is always valuable.

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In this connection, it may be stated that among the most important preventations of ear-trouble is the keeping of the nasal passages perfectly free and clean. This cleanliness of the nose is rarely impressed upon children, but it cannot be too carefully observed. Foreign bodies that may be in the external canal should be removed at the earliest moment.

The long-continued subjection of the ear to high and shrill musical notes is often harmful to it. Brass instruments, emitting high notes, are the most to be feared; but the continual repetition of high notes, as in scale-practicing on the piano, is not invariably harmless. When practicing of this sort is necessary, it should be abandoned when sensations of fullness or of buzzing appear in the ear; but, if practice is continued, cotton should be used in the ears.

The striking of children about the head, and the pulling of the ears, are, of course, bad for many reasons; but it is especially necessary to avoid them to prevent ear-thickenings and ruptures. Many a patient with serious ear-trouble attributes it entirely to this cause.

Habitual late hours have a bad effect upon the ears of some. Of course, if there is the slightest evidence of the existence of this cause, the sleeping hours should be lengthened.

Of the injury which tobacco occasions, much can be said. There are those who are very susceptible to tobacco, especially when it is smoked; on these the absorbed nicotine seems to exert its influence primarily on the auditory nerve and ear-structures. This effect is much more frequent and more marked upon children who are not fully developed. Its effect upon the ears of growing boys is often very noticeable; in children of six or ten years of age, it almost invariably impairs the hearing. Many cases of pronounced deafness have originated from this habit, the mischief being done while the patient was unconscious as to the cause. Children under eighteen years of age should never be allowed to smoke tobacco. In proportion as they grow older does the probability of resulting ear-trouble diminish, but, should the slightest impairment of hearing come on, the tobacco habit should be immediately stopped, as in such cases its effect is always deleterious.

Opium-eaters and smokers often suffer with ear-affections, which are preventable only by the discontinuance of the habit on the slightest evidence of ear-difficulty. Cigarettes, not infrequently containing

opium as well as tobacco, are often very injurious. Quinine deafness is to be guarded against by the discontinuance of the drug whenever this is necessary. The excessive use of coffee is to be discouraged. Whenever it seems injurious to the ears, it should no longer be used.

Some occupations are liable to bring with them ear-troubles. It is hard for boiler-makers, workers in match and lead-paint factories, and in mills, as well as those employed where monotonous noises are fairly constant, or where sudden excessively loud noises are occurring, to escape ear-troubles. Much can be here accomplished in the way of prevention by the use of cotton within the meatus, by ear-inflation, and by thorough cleanliness. An easy and effective method of prevention is the regular systematic examination of the ear, for instance, every six or twelve months, followed by treatment, if necessary.

Should at any time any symptoms occur, the ears should be immediately examined and treated.

It will be realized that prevention consists not only in avoiding the causes of ear-disease whenever possible, and, when this cannot be done, in the taking of precautions to forestall the possible effect; but also in immediate treatment, whenever the ear is threatened, with the view of aborting the ear-trouble. When this cannot be accomplished, the effort should be so to limit the disease that the ear suffers the least possible impairment.

The importance of this course, and its great value, must be impressed upon the laity, who for too long a time have believed that "ears will get well of themselves"; that "the hearing will get worse if treated"; that it is "better to allow the discharge in children to continue"; that "it will disappear as the child grows"; or that, anyway, the trouble is slight, as it is "only an ear." Teach them that precautions should always be taken, but tell them particularly that, whenever any ear-trouble is threatening or has appeared, to have it treated immediately, and treated until it is well. Tell them that ear-disease is usually, in its commencement, easily cured; and, if advanced, that it can be greatly alleviated; but, if let alone—as is so often advised by friends, as well as sometimes by the medical adviser—that the result is sure and distressing. If we do this, we will have done our duty, and accomplished at least a little toward alleviating the pain and inconvenience, of which there is always sufficient with us.

Northwest corner Sixth and Green Sts., Phila.

## SOME NEW INSTRUMENTS.

BY A. ADY, M.D.,  
MUSCATINE, IOWA.

**Uterine Constrictor.**

In the operation of trachelorrhaphy as a means of controlling hemorrhage from the cervix, the firm of Tiemann & Co., New York, made for me a simple and inexpensive instrument which answers the purpose admirably, and is not in the way of the operator.



It consists of a canula like a catheter, bent to fit the anterior part of the vagina and hook around the pubes. At the outer end is a screw like that in a light and small écraseur. The loop that goes around the cervix, as seen in the cut, is of twine or fine copper wire (which is the easiest to adjust). To use the instrument, grasp the os with tenaculum, pass the loop over it and around the cervix. One end of the cord or wire being fastened to the peg, pull the other through and give it a few turns around the same; the loop can then be tightened by a few turns of the screw.

The instrument is very light, needs no assistant to hold it, and is easily cleansed.

**Elastic Stem Pessary.**

In treating uterine flexures or curvatures unconnected with great stenosis, I have had trouble with a rigid stem pessary, which causes irritation of the part. Conceiving

the idea that elastic pressure would be the proper mode of treating those as well as flexures of other parts of the body, I applied to Messrs. Tiemann & Co., of New York, who constructed the instrument represented in the wood-cut below. It is made of soft red rubber, of the same shape as an ordinary simple stem pessary, with a flange at the lower end fitting smoothly over the cervix, but perforated so as to allow free discharge of secretions. The stem is hollow, so as to allow the introduction of an elastic stylet of any desired strength the operator may wish, but great force is not necessary. The stylets can be made by any person, whittled out of whalebone or hard rubber, left large enough at the outer end to tightly fill the stem, exclude the moisture, and retain it in place.

In ordinary cases, the stem can be introduced with the stylet in position; but, when the parts are intolerant, the rubber alone can be worn until a tolerance is established, after



which the spring is easily slipped in without the least danger of lacerating or irritating the over-sensitive endometrium. Under elastic pressure applied in this way, curvatures soon disappear. Other pessaries for retaining the uterus in position can be worn at the same time without interfering with this one. When the uterus is in normal position, the vaginal walls exert pressure enough to keep the stem in position. When they do not, pledgets of antiseptic wool or cotton should be used. These stems should be made of two lengths and sizes,  $2\frac{1}{4}$  and  $2\frac{1}{2}$  inches long and Nos. 6 and 10 in size. The size and length of the stylet can be made to make quite a difference in their size and length.

The stylet in the above cut is pictured too long: it should be no longer than the cavity in the stem.

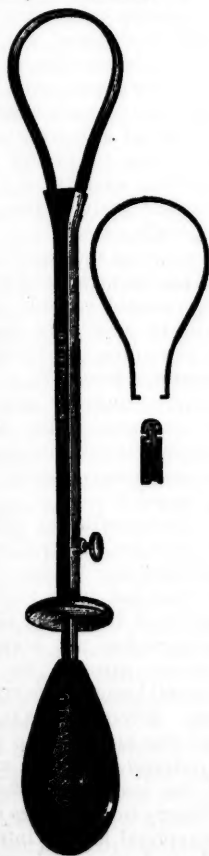
**Uterine Tourniquet and Expanding Curette.**

This instrument was originally invented and used as an expanding curette and roughly made of a piece of watch-spring and a piece of catheter. This was sent to Messrs. Tiemann & Co. to have a more perfect one manufactured. I thought from their model that it could be used as an improvement on

Emmet's uterine tourniquet, and such proves to be the case.

It is light, small, and can be taken apart for cleaning by turning one set-screw.

We should have several different lengths of watch-spring loops; for the tourniquet, the latter is better made light, but, when used as a curette, it should be of the strongest. In doing Emmet's operation, place the loop around the cervix, tighten it by pushing on the flange to any desired tension, and fasten it by the set-screw; it will not slip off or come loose during the operation. It is very easily controlled.



When it is desirable to use it as a curette, put in a heavier and shorter loop, and draw it back into the canula, when it is easily introduced into the uterine cavity where it can be expanded, by pulling on the flange with the thumb, to any desired extent. The piece of watch-spring adapts itself to the cavity, and, when rotated, will detach anything that may be attached in shape of a secundine, without danger of lacerating the uterine walls.

## THE GERM THEORY OF TYPHOID FEVER AND THE THERAPEUTIC INDICATIONS IT SUGGESTS.<sup>1</sup>

BY J. A. ELLEGOOD, M. D.,  
LAUREL, DEL.

It is now commonly believed that typhoid fever has for its immediate cause the ingestion and development within the human body of a living germ, and, while proofs to this end are not as yet conclusive, we are in possession of sufficient knowledge to establish this opinion with considerable degree of probability. The presence of special microbes in typhoid fever was first observed by Recklinghausen in 1871; but, for an exact description of this minute organism, we are indebted to the recent researches of Eberth and Klebs. This organism, which they found in a large percentage of the cases examined, and to which they gave the name *bacillus typhosus*, belongs to that group of bacteria called Schizomycetes.

This group was for a long time classed with the vegetable fungi, but recent researches into their organization and reproduction show that they resemble a group of inferior algæ termed *Phycocromyacea*, but that they differ from the other members of this group in being devoid of chlorophyl. No sharp line, however, divides the fungi from the algæ, and many families of each are really correlated, inasmuch as they agree in the characters of reproduction and alternation.

Zopf asserts that the same species of alga may accommodate itself to two very different modes of existence. When these algæ are found in water or on damp soil, they exist in the form of plants, and live and multiply by means of chlorophylaceous protoplasm; but, when deprived of moisture, a contraction of the protoplasm in the interior of the cells takes place, forming spores; the cell-walls rupture, and the spores thus set free become air-germs, and are wafted about by the slightest breeze. When these germs encounter a favorable medium, they develop, first, in the form of micrococci, then of bacteria, bacillus, or that of whatever species to which the spore in question belongs. The bacillus typhosus appears in the form of long and short rods, slightly constricted in the middle, and with rounded extremities. They are formed of a thin membrane of colorless cellulose, filled with

<sup>1</sup> Read before the Delaware State Medical Society, Georgetown, Del., June 12, 1888.

a colorless protoplasm. They are about 0.0002 mm. thick, and form filaments up to 0.05 mm. long. They contain vacuoles or spores, and stain easily with methyl-violet. Multiplication is effected by fission, each half becoming of the size and shape of the parent cell and soon splitting again.

The long ones are found only in the intestinal glands, the short ones in the mesenteric glands, spleen, liver, often in the red corpuscles of the blood, and sometimes in the kidneys and urine of typhoid fever patients. They are numerous in the intestines when ulceration of the solitary and agminated glands begins, but become fewer and are succeeded by other microbes as the disease approaches its end.

The bacillus in question is, however, the only one found in the blood and internal organs during the fever, and has never been found associated with any other disease than typhoid fever.

The fact that the bacillus has not been found in all of the cases examined is no proof that the disease is a non-bacterial one; for, aside from the difficulty of the demonstration of bacteria, it should be remembered that post-mortem material is not well suited for this purpose, since the patients examined generally live to an advanced stage of the disease, and, in many cases of bacterial affections, all traces of bacteria have disappeared by the time the tissue-changes occasioned by the invasion are complete. Gaffky, a pupil of Koch, has succeeded in the artificial culture of the microbe taken from the spleen of patients who had died of typhoid fever, and found that it developed actively on gelatine and potatoes. At a meeting of the Medical Society of Lyons, July 27, 1887, M. Rodet presented some slides made from the sediment of drinking-water in places recently ravaged by typhoid fever, and at the same time some mounts prepared from a mesenteric ganglion of one of the deceased typhoid fever patients. In all of them, the typhoid bacillus was present in great quantity, and the bacilli in the sedimentary mounts were identical with those in the mounts of the mesenteric ganglion. Brautelecht found the bacillus typhosus in suspected drinking-water and in the urine of typhoid fever patients. Cultures made from these and injected into rabbits produced fever. Tizzoni also isolated the bacillus in question from drinking-water during a typhoid fever epidemic; injected into rabbits, it produced symptoms in many respects resem-

bling typhoid fever, and, in the tissues, the same character of bacillus as that observed in man was found. So far as the characteristic intestinal lesions are concerned, the attempts to reproduce typhoid fever in animals by inoculation have been unsuccessful.

Before a disease can be considered due to the presence of a specific microbe, the four following conditions must be fulfilled (Koch): 1. "The microbe in question must have been found either in the blood or tissues of the man or animal which has died of the disease."

2. "The microbe taken from this medium and artificially cultivated out of the animal's body must be transferred from culture to culture for several successive generations, taking the precautions necessary to prevent the introduction of any other microbe into the culture, so as to obtain the specific microbe pure from every kind of matter proceeding from the body of the animal from which it originally came."

3. "The microbe thus purified by successive cultures and reintroduced into the body of a healthy animal capable of taking the disease ought to reproduce the disease in question in that animal, with the characteristic symptoms and lesions."

4. "Finally, it must be ascertained that the microbe in question has multiplied in the system of the animal thus inoculated, and that it exists in greater number than in the inoculating liquid."

That all these conditions have not been fulfilled, as regards the bacillus of typhoid fever, is probably due to the fact that the experiments have not been performed upon animals capable of taking the disease, or, if capable, the germ has not been introduced into the system through the alimentary canal. It is well known that certain bacteria produce very different effects, not only according to the animal into whose body they are introduced, but also according to the part of the body into which they are injected. Since circumstances indicate that the cause of typhoid fever is introduced into the body through the medium of ingesta received into the alimentary canal, it might reasonably be supposed that the intestinal glands represent the points of invasion and local settlements of the germ, and afford the conditions most favorable to its existence and reproduction. Were the intestinal lesions of trophic origin, they would as invariably be reproduced by inoculation as they are present in spontaneous cases. As further evidence that the poison gains entrance into

the system produces to refer most involved related

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the system through these glands and here produces the primary irritation, we have only to refer to the fact that the mesenteric glands most involved are always those most directly related to the ulcerated areas.

The action of the germ as a pathogenic microbe is virtually that of a specific ferment, and the phenomena are of the same order as those which characterize the regular accomplishments of animal life. Like all other forms of life, whether of animal or of vegetable nature, it breathes by absorbing oxygen. It is not necessary, however, for its existence, that the oxygen exist in the form of air, and on this account it is called an anaerobic microbe. It is capable of withdrawing from oxygenated substances the oxygen necessary for its respiration, and the decomposition which it excites in organic compounds is in part a consequence of the disturbance of equilibrium resulting from this respiration. Beside oxygen, it requires to be supplied with certain definite nutritive substances, and the mineral salts, alkaline and alkaline-earthly phosphates, nitrogenous substances, and carbohydrates contain elements necessary to its normal development. These substances are decomposed by it under proper adjustment of temperature and of moisture, and what is suitable to itself is appropriated out of these various compounds. The nutritive activities of the bacillus as a human parasite involve disintegration and appropriation of some of the elements of the fluids upon which the tissues depend in the expression of their cell life; and degeneration and necrosis of the fixed cells may be brought about by local settlements of the germ, and in consequence of a disturbance in various ways of the circulation, or because of a special mechanical action exercised upon the ultimate particles of compound matter of which the tissue cells are composed.

The special changes it calls forth are determined by the constitution of the soil upon which it feeds, and by the special nature of its wants. We do not know the nature of the influence which it brings to bear upon the nutrient medium, nor can we formulate the changes it excites. "No one doubts that in organic living cells, whether they be isolated or form an integral part of a more complicated organism, there resides a special force, capable of producing chemical reactions under conditions quite different from those which we employ in our laboratories, and to produce results of the same class.

"This force, which we imagine to be as material as heat, reveals to us its activity

by decompositions effected on complex molecules." We may believe that bacteria do not communicate to the organic compounds contained in the juices the same kind of chemical motion as do the tissue cells, and therefore do not give rise to the same chemical changes as the latter.

Since the bacillus is never found in great quantity in the blood, the energy stolen and expended in the performance of its physiological processes and the mechanical traumatism which it effects, will not account for the severity of the ataxia of typhoid fever. A study of the nature and actions of the germ leads us to conclude that the disturbance which it causes represents more of its chemical than of its physical effect, and that this effect is manifested through the production of poisonous substances which have more to do with the genesis of the symptoms than has the mere withdrawal of nutriment. Only a limited portion of the medium from which the microbe withdraws its nourishment is utilized by it in the production of force, and the greater portion of the molecule broken up, now dissociated, seeks other relations and forms new products foreign to the animal organism. Beside these, it probably gives rise to other products of excretive or secretive origin. These substances are but slightly soluble, not easily eliminated, and of toxic character. Those products which result from the disintegration of albuminoid substances are regarded as especially noxious, and their actions are analogous to those of some of the poisonous vegetable alkaloids. From artificial cultures of the bacillus taken from typhoid fever patients, a crystallizable alkaloidal substance has been obtained, whose physiological actions correspond in many respects to the clinical features of the disease. Whether this substance is of a secretory character or a by-product of decomposition has not been determined. The alkaloidal substances formed during the decomposition of albuminoid substances are called ptomaines, from *πτῶμα*, a carcass, because they were first obtained from corpses and putrescent organic matter. The relation of microbes and ptomaines can be easily demonstrated. By means of a Chamberland filter they can be separated, and, if the microbe be transferred to the infusions of successive cultures so as to purify it from every foreign element, it continues to produce its characteristic ptomaine, which is manufactured completely at the expense of the culture liquid. No ptomaine, however, is developed without its special microbe.

Brieger proposed, for the poisonous ptomaines, the affix toxine, and, adopting his nomenclature, we call the ptomaine of typhoid fever *typhotoxine*.

"From cultures of the typhoid bacillus he obtained the basic typhotoxine,  $C_8H_{17}NO_2$ , which produced in small animals lethargic conditions with liquid dejecta." The disposal of ptomaines, as well as other products of tissue metamorphosis which accumulate in the system during the fever and which are not eliminated by the respiratory organs, kidneys, and skin, is effected largely by oxidative changes, which give rise to soluble and easily eliminated waste. If oxygen be supplied in abundance to a fermenting albuminous liquid, the primary products of decomposition at once undergo further change. The oxygen oxidizes them as they are formed.

The increase of temperature in typhoid fever involves an increase of organic disintegration without a corresponding increase of constructive metamorphosis, and is due:

1. To chemical changes excited by the parasite itself—phenomena, for the most part, of hydration and reduction.
2. To diminished elimination of caloric—owing to cutaneous capillary contraction and diminished excretion of water.
3. To excess of reactions which normally occur in the body during the acts of nutrition, which excess is the result of the action on the nervous system of the products of bacterial decomposition. It is probable that these products excite nervous impulses which call forth increased metabolism, and that this does not represent a true exaggeration of the physiological process of calorification, but that omissions or changes occur in the relative proportions of that series of actions by which, in health, the two constant movements of composition and decomposition are accomplished. In consequence of this, there is in the system an accumulation of products of imperfect disintegration which are still capable of contributing to organic synthesis and the formation of new cells, and which have not reached the limit of splitting up at which they naturally become excrementitious.

It appears that the accumulation of these products in the circulation, which are sometimes called leucomaines, gives rise to separate and additional disturbance.

Until a comparatively recent time, the increase of temperature in typhoid fever was supposed to be secondary to increase of organic oxidation. It is now known that oxidation is not the exclusive source of

animal heat and febrile pyrexia, but that in typhoid fever, in comparison with the other reactions which take part in the production of the pyrexia, oxidative changes undergo a remarkable diminution—a diminution much greater than that for which the reducing agency of the bacillus will account.

It is also known that the chemical reactions which accompany the transformation of proteids and their immediate derivatives are, for the most part, phenomena of hydration, and "that dissimilation is accomplished by the successive acts of which the first are hydrations and chemical combinations, which give rise to products which are only secondarily overcome by oxidation, and that animal heat results from the *ensemble* of all these reactions." To determine the relative diminution of the oxidation of the nitrogenous elements in fever, the quantity of urea eliminated is compared with the total quantity of urinary solids, and these proportions with those which exist in health.

We know that typhoid fever is a self-limited disease, but what determines its duration we do not know positively.

Although we cannot deny that susceptibility to the disease is increased through the agency of influences which tend to lower the general condition of vitality, the history of epidemics leads us to believe that the conditions fit for the existence and growth of the bacillus are ever present in the system, and that all that is necessary for the development of the disease is its introduction into that part of the body which it especially invades. The relation which age bears to typhoid fever is in proportion to development or condition of the intestinal glands, which undergo ulceration during the disease. It has been stated that the glands of Peyer are most fully developed at puberty and begin to disappear after adult life, and that traces only of their existence are apparent after forty-five. Post-mortem examination of victims of typhoid reveals less extensive abdominal lesions in young children and old persons, and there is little doubt but that immunity from repeated attacks is great, and the severity of such cases less, in proportion to the previous destruction of these glands.

The therapeutic indications based upon the germ theory are: 1. To destroy the germ; 2. To combat its effects.

Although it may seem that the problem of destroying the germ may not be so difficult, provided the opportunity of treatment is early offered, we are, nevertheless, as yet,

in view of our imperfect knowledge, unable to destroy directly the morbid organism which gives rise to the disease, when once it has gained access into the body.

Since the ataxic symptoms of typhoid fever are secondary and usually proportionate to the elevation of temperature, the primary aim in combating the effects of the germ is the reduction of fever and the restraining and regulation of organic disintegration, to the exaggeration and modification of which the pyrexia is mostly due.

Reduction of temperature is accomplished—1. By the external application of cold; 2. By the internal administration of antipyretics. The application of cold affects not only the abstraction of heat from the body, but promotes the regulation of organic disintegration, and tends to restore the normal process of heat-production by increasing the absorption of oxygen. Frédéricq has shown that "cold, when acting upon the cutaneous surface of man, augments manifestly the ratio of oxygen absorption and carbon-dioxide production"; and Quinquaud, who has carefully studied the action of cold and heat on the chemical phenomena of nutrition, has also arrived at the conclusion that cold baths augment the absorption of oxygen and the activity of interstitial combustions.

Cold baths probably promote absorption of oxygen by the reflex stimulation which they exert on the nervous system, and, as previously stated, oxidation diminishes the formation of ptomaines and the products of defective disintegration, and assists in the elimination of those already formed. It is obvious, then, that much good can be accomplished by the use of agents which set free or favor the absorption of oxygen. Among the agents which fulfill this indication are alcohol, the salts of organic acids, the free ingestion of liquids, and the inhalation or rectal administration of pure oxygen.

Antipyrine and antifebrine, the internal antipyretics most extensively employed, neither affect the special cause of the fever nor assist in the removal of the incompletely-oxidized organic residue. They diminish nitrogenous disintegration probably by depressing the power of the cells of the heat-centre to respond to stimuli, or by lessening the power of the afferent nerves, or those portions of the cord which transmit the impulse from that centre. The next indication is to repair the destruction and degeneration of tissue and the promotion of nutrition by judicious alimentation.

In concluding this paper, the writer

desires, for the promotion of science, and thereby the good of humanity, to make the following suggestions:

1. That a national or international experimental commission be appointed to make investigations, with a view of determining the cause and best method of treating typhoid fever.

2. That, in addition to the lower animals, human beings be made the subjects of experiment.

3. That, in order to obtain human subjects for experiment, criminals sentenced to capital punishment or long terms of imprisonment may have their sentences commuted, and that, instead of suffering the usual penalty of their crimes, may become the subjects, for a specified time, of experiment.

4. That no one be chosen who is not a voluntary offering, and that no one be subjected to tortures or absolutely fatal experiments.

## PERISCOPE.

### Diuretic Action of Strophanthus.

At the meeting of the Biological Society of Paris, June 9, 1888, M. Lemoine, of Lille, stated that polyuria is the most constant of all the effects produced by strophanthus. He has always determined this by giving the tincture of strophanthus to healthy persons. Five or six drops are sufficient nearly to double the quantity of urine in forty-eight hours. He has nearly always secured diuresis in patients with heart-disease, unless they were in a condition of complete asystole, when strophanthus is at times, though rarely, incapable of bringing about diuresis. It fails especially when there is extensive pulmonary oedema and great embarrassment of the pulmonary circulation.

It is a singular fact, he says, that the diuretic effects of strophanthus persist for a very long time after it has ceased to be administered. The urine decreases to the normal amount only by insensible degrees. Fifteen days after the drug has been stopped, the patients still pass two quarts of urine, although when they were taking strophanthus the daily quantity was three quarts, and before treatment only about thirteen ounces.

M. Lemoine does not think that strophanthine gives as satisfactory results. In three patients, tincture of strophanthus has occasioned a profuse serous diarrhoea, which was controlled only by stopping the drug.—*Bulletin Médical*, June 13, 1888.

### Cancer of the Larynx.

At the meeting of the Société Française d'Otologie et de Laryngologie, April 26, Dr. J. Charazac, of Toulouse, related a case of cancer of the larynx, and made some remarks on the treatment of that disease. The patient, a healthy man, aged sixty, had for years been subject to frequent attacks of hoarseness, and he had besides been an immoderate smoker. He had never had syphilis, but it may be worth mentioning that his wife had died some years before of cancer of the breast. For eighteen months before he came under the notice of Dr. Charazac, he had suffered from persistent aphonia.

On October 1, 1887, the epiglottis and the left side of the larynx showed the ordinary signs of chronic laryngitis; on the right side there was a deep ulcer with grayish base occupying the centre of a swelling which involved the ventricular band and reduced the glottis to half its natural size. Dr. Charazac diagnosed the affection to be malignant, and proposed laryngectomy, which was declined. On February 19, tracheotomy became necessary, and the disease has since made steady progress. The most troublesome symptom at the date of the report was the passage of food into the larynx; this was found to be due to the fact that the tumor, as it increased in size, pushed up the epiglottis so as to interfere with its action in swallowing. In discussing the treatment, Dr. Charazac compared the results of simple tracheotomy with those of extirpation of the larynx for cancer. Statistics showed that the former increased the average duration of life by six or eight months, while after laryngectomy two-thirds of the patients died either from the immediate effects of the operation or from rapid recurrence of the disease. This discouraging result is, however, in Dr. Charazac's opinion, due rather to the want of a proper selection of cases than to any inherent fatality in the operation. He thinks that, as a rule, it should not be performed in patients over seventy, and he looks upon it as absolutely contra-indicated in all cases in which the glands are affected or the general health impaired. It should never be done unless the disease is strictly limited to the interior of the larynx, but in suitable cases early operation is imperative. If these rules are adhered to, Dr. Charazac believes that laryngectomy will prove much more successful in the future than it has been up to the present time.—*British Med. Journal*, June 30, 1888.

### Rare Case of Eclampsia.

At the meeting of the Obstetrical and Gynecological Society of Paris, June 14, 1888, M. Charpentier said that on May 17 he was called to see a young primipara six and one-half months pregnant, who had been taken on the preceding night with eclampsia. He was informed that toward the end of the fourth month the patient had suffered with œdema of the lower limbs and that the family physician had discovered a considerable quantity of albumin in the urine, and had advised a milk diet. This advice was not followed.

On the night of May 16-17, she had a violent attack of eclampsia. The following day, when M. Charpentier saw her, there was enormous œdema, marked dulness, and embarrassment of speech. Heat showed abundance of albumin to be present in the urine. The temperature was normal; the pulse 80. She was ordered milk diet, and given chloral. The next day, the albumin had considerably diminished, but there appeared great pain at the pit of the stomach. The foetal heart-sounds were absent. Chloral and morphia were given. During the night of May 19-20, there were three convulsions at intervals of half an hour. On the morning of 20th, acute epigastric pain and headache were present. On the 21st, the symptoms improved a little, but, by the 22d, there was trouble with vision. The next day, improvement occurred and persisted. On June 2, the patient was delivered of a foetus, which was dead and macerated.

The interesting points about the case are that the woman took no precautions to avoid the serious danger to which she was exposed, the small number of convulsions, the death of the foetus from the first convulsion, normal temperature throughout, the appearance, after the attack, of symptoms usually regarded as prodromic.—*Bulletin Medical*, July 8, 1888.

### Entrance of Air into a Vein.

At the meeting of the Surgical Society of Paris, July 4, 1888, M. Reynier stated that very recently, while removing a tumor from the carotid region of a young man, he heard a gurgling sound, such as air produces as it enters a vein. For two days, no accident occurred; but, on the third day, the bruit was renewed, and was followed by sudden death. At the autopsy, M. Reynier found a hole in the jugular vein, and a considerable quantity of air in the vein.—*Bulletin Medical*, July 8, 1888.

**Atypical Varieties of Lupus Vulgaris.**

At the meeting of the Academy of Sciences of Paris, July 16, 1888 (*Gazette Hebdomadaire*, July 27, 1888), M. Henri Leloir read a note upon the atypical varieties of lupus vulgaris, and expressed the opinion that these, as well as the classic form of the disease, should be regarded as attenuated tuberculosis of the skin. He recognizes three atypical varieties—the colloid, the mucoid or myxomatous, and the sclerous, which are so named by reason of the characters which they present. He uses the word “attenuated” tuberculosis because (1) these forms contain few bacilli; (2) infection of an animal occurs much more slowly than if true tubercle is employed; (3) unless very large particles of lupus are inoculated, the inoculation may be negative.

He thinks it is important to recognize these atypical varieties of lupus in order to avoid errors in diagnosis.

**Rapid Method of Using Fehling's Test for Sugar.**

In a communication to the *New York Medical Journal*, July 7, 1888, Dr. Walter Mendelson says that everyone who has critically examined many specimens with Fehling's solution will have noticed two striking facts. The first of these is that some urines from which sugar can by various tests be positively excluded will decolorize the solution, and even give it an orange or opalescent-green tint. The second is that urines known to contain sugar fail to produce a characteristic precipitate with Fehling's test, giving instead appearances identical with those just described, or filling the test-tube with a precipitate usually of a yellowish-green color, which never turns red and never satisfactorily settles to the bottom, and which is, moreover, so fine as to pass through most filters. The reason for these disturbing variations from the classical action of the test, as described in the books, is to be found in the fact that urine contains normally two classes of bodies, one of which has the power of reducing copper oxide, and the other of redissolving such oxide when from any cause it has been reduced. We have then, he says, two substances of antithetical action, the final result of their presence depending upon which preponderates in quantity. The less sugar the specimen contains, the more disturbing these variations become, and it may happen that as much as one-half of one per cent. of

sugar is present without a characteristic precipitate being formed. Concentrated high-colored urines are, as a rule, more apt to show these peculiarities than dilute pale urines. Two kinds of error are consequently likely: One that traces of sugar may be overlooked, the other that traces may be reported in urines containing none.

To avoid these difficulties, he advises the following procedures: First, use a flask capable of containing about 250 c. c. (8½ oz.), and, after adding the usual 10 c. c. (160 minims) of Fehling's solution, fill half full of water, or until the solution is of a very pale blue. The reaction takes place much better and can be more closely observed than when the test solution is used in concentrated form. Second, the urine should be well diluted. Make a preliminary qualitative test to judge approximately of the quantity of glucose present and dilute accordingly. One in ten is a convenient strength. This, together with the thinning of the Fehling's solution, will insure proper dilution of the normal reducing and dissolving substances of the urine, and minimize their disturbing action. The temptation to use the urine but slightly diluted or of full strength when the amount of sugar is small, so as to shorten the time necessary in using the burette, is very great, but will always be regretted if yielded to, for it generally ends in compelling one to undertake the whole analysis afresh after wasting considerable time.

Put the diluted Fehling's solution on to boil while preparing the dilution of urine and filling the burette. Then, when all is ready, in starting the process, allow only a small quantity—from one-half to one c. c. (8-15 minims)—to flow from the burette before boiling again, removing the flame and allowing the ebullition to cease each time before adding more. *Boil hard* each time, as this causes the particles of oxide to cohere and fall to the bottom more quickly than otherwise.

Even under the most favorable circumstances—that is, when a red precipitate appears at once and falls quickly to the bottom as the reaction nears completion—a considerable time must always elapse before the supernatant fluid is sufficiently clear to allow the analyst to determine whether all the blue color has been discharged or not, especially as the fine particles of red oxide, when in suspension, give to an otherwise colorless fluid a violet shimmer. This settling may be hastened by adding a dash of cold water to the

contents of the flask; but Munk has devised a method which is probably the greatest improvement in the use of Fehling's solution since the test was first proposed, and which Dr. Mendelson desires to popularize. This improvement consists in adding a small quantity of a solution of calcium chloride to the mixture in the flask. (Munk recommends three to five drops of a 15 per cent. solution, but in practice Dr. Mendelson simply makes a pretty strong solution, and uses as much as seems needed.) A voluminous, white, curdy precipitate is formed, consisting in part of calcium hydroxide and in part of calcium tartrate, the latter being less soluble in hot than in cold solutions. This precipitate, from its curdy gelatinous nature, carries down with it the impalpably fine powder of the copper oxide, and quickly leaves a clear supernatant fluid in which the most delicate shade of blue is discernible, if present.

In practice, Dr. Mendelson has found the following the best mode of procedure: If the oxide comes down red in the beginning, he continues adding from the burette until the rapid falling of the precipitate to the bottom of the flask warns that the reaction is nearly complete. He then adds about ten drops—or enough to give a pretty large quantity of precipitate—of the calcium-chloride solution. When the precipitate of copper is yellowish-green and shows no sign of turning red, he adds the calcium-chloride solution as soon as he has satisfied himself of the latter fact. Great care, he says, must be used to boil slowly at first, allowing the flame of the burner to play gently, with frequent removals, about the bottom of the flask until the whole mass gradually boils. If this is not done, owing to the character of the precipitate, explosive boiling may occur, and the whole contents of the flask be suddenly landed on the ceiling.

When boiling is once under way, there is no more danger of such an accident occurring, and ebullition should be maintained for some minutes before the precipitate is allowed to settle. Should it be found, after the calcium tartrate with the copper oxide has settled to the bottom, that considerable copper still remains in solution to be precipitated, it will generally be necessary to add from time to time, as the urine is run out of the burette, a few drops more of the calcium-chloride solution, as the freshly precipitated calcium tartrate has greater clarifying powers than that which has already been used. Should the amount of precipitate become finally very large, more water

should be added to the flask. By the use of this method, he says, a sugar determination may be made in twenty minutes, and several can be done together in even less time each; whereas, under the common method, half an hour would be very short and very exceptional, and an hour or more—depending on the nature of the specimen—nothing unusual.

In conclusion, he says: "Two years' constant use, embracing specimens of all varieties of contrariness, warrants me in heartily recommending Munk's method to all who have many, or indeed any, quantitative determinations to make, and to whom time is valuable."

### Caffeine in Heart Disease.

At the meeting of the Therapeutical Society of Paris, July 11, 1888, M. Huchard stated that some time ago he had had the care of a woman 70 years old, who had heart disease of arterial origin, accompanied with complications. Digitalis for a while did good, but eventually failed, so that M. Huchard almost despaired of the patient's recovery. He then tried caffeine hypodermically, according to the following formula:

Benzoate of soda . . . . .	gr. xlv
Caffeine . . . . .	gr. xxx
Distilled water . . . . .	℥jxc

M. Sig. For hypodermic injection.

He gave four, five, and six of these injections a day, and under their influence the pulsations of the heart became more energetic, the patient became stronger, and the excretion of urine, which had been nine and one-half ounces, increased to thirty-eight and forty ounces. He believes that caffeine exercises its action especially upon the nervous system.—*Bulletin Medical*, July 22, 1888.

### Exstrophy of the Bladder.

At the meeting of the Academy of Medicine of Paris, July 24, 1888, M. Léon Le Fort presented a boy upon whom he had successfully operated for exstrophy of the bladder, a congenital malformation consisting in the absence of the anterior wall of the abdomen at the level of the bladder. He was able completely to cover in the bladder and to make a channel for draining the urine, so that it no longer flowed upon the groin and thighs, but into a rubber receptacle which could be easily hidden under the clothing.—*Gazette Hebdomadaire*, July 27, 1888.

### Abscess Outside the Tonsil in an Infant.

Dr. W. Pasteur, physician to the Northeastern Hospital for Children, reports a case of this kind in the *Lancet*, July 14, 1888. He was unable to discover the exciting cause of the suppuration. The region involved was the cellular tissue outside the right tonsil and the tonsil itself. The posterior wall of the pharynx was quite free, and there were no signs of spinal caries. There were no enlarged glands in the neck.

The patient, three months old, was brought to the out-patient department of the Northeastern Hospital for Children last February, with the following history: The infant had been breast-fed, was always fairly healthy, and had been well cared for. Ten days previously, the mother noticed that the child had some difficulty in swallowing, and breathed badly when he was at the breast. A doctor was called in, who ordered hot fomentations to the neck. The child became rapidly worse. After three days, a swelling was noticed in the right side of the neck. A week later, the child's condition was so alarming that the mother brought him to the hospital. The patient was a rather wasted, pallid infant, with labored catching breathing, not unlike that in a bad case of catarrhal laryngismus. Swallowing was practically impossible. There was a diffuse deeply fluctuating swelling in the right side of the neck at the anterior border of the sterno-mastoid. The skin over it was moderately tense, but was not reddened. On looking into the mouth, the passage of the fauces was seen to be almost entirely occluded by a large swelling in the position of the right tonsil. By passing the little finger carefully behind this, it was ascertained that the pharynx was perfectly free, and that a distinct fluctuation-wave was also communicable from the tonsil to the tumor in the neck. At Dr. Pasteur's request, Mr. Blake, the house surgeon, made a short incision into the most dependent part of the tumor in the neck, and evacuated three ounces of inodorous green pus. The swelling at the back of the mouth immediately disappeared, and all the distressing symptoms were at once relieved. A probe passed through the wound impinged against the finger on the tonsil with only mucous membrane intervening. The wound healed completely in ten days. The child was kept under observation. He remained absolutely free from all throat-trouble until June 19, when another abscess of the same size formed in exactly the same situation in the course of a

few days, giving rise to an identical train of symptoms. The same operation again gave instant relief. On this second occasion, the abscess-cavity was explored with the finger, and its relation to the tonsil clearly established. In the neck, the cavity lay in front of the great vessels.

### Transmission of Tuberculosis by Means of Flies.

In the REPORTER, October 15, 1887, p. 517, we published a brief note on a communication to the Academy of Medicine of Paris, by MM. Spillmann and Haushalter, in which they showed that it was possible for flies to carry with them the contagion of tuberculosis. A new and highly interesting contribution on this subject has been recently furnished, says the *Wiener med. Presse*, July 29, 1888, by Dr. E. H. Hoffmann, of Dresden, whose communication is contained in the *Deutsche Medizinische Zeitung*, No. 57. It seems that Dr. Hoffmann found some flies in a house in which a patient had died with advanced tuberculosis, and whose sputum had contained great quantities of tubercle bacilli. These he took home and subjected to examination. Tubercle bacilli were found in their intestines, at first in larger and subsequently in smaller quantities. Their excretions, which covered the walls of the house in the form of numerous specks, also contained tubercle bacilli. Dr. Hoffmann prepared the specimens by carefully taking a speck of fly excrement from the wall with a platinum needle, and rubbing it with water upon a cover-glass. In no preparation obtained in this way did he fail to find the bacilli. As often as he had before examined flies in his house, he never had been able to find bacilli in either their intestines or their excrement. On the other hand, he fed some flies, which were apparently healthy, upon tuberculous sputum, and found that, in a few days, a large number of the flies died, so that the chandeliers were covered with dead flies.

To determine the vitality of the bacilli transmitted by the flies, he inoculated them into the anterior chamber of the eyes of guinea-pigs. Of five experiments, four were without result. In one, however, the success was complete: at the autopsy, a large number of fresh small tubercle nodules were found in the lungs, liver, and spleen, while the bronchial glands were swollen. The question of the vitality of the bacilli transmitted by flies must, therefore, be answered in the affirmative.

### Slow Facial Palsy in Fractures of the Petrosa.

A. Demoulin, in a series of papers on this subject (*Gazette Médicale*, July 7, 14, and 21, 1888), finds that facial palsy in fractures of the petrous portion of the temporal bone may be slow in making its appearance. In such cases, it should be referred, he says, to the compression of the nerve by swelling of the periosteum which lines the aqueduct of Fallopius, at the time when the work of repair is going on. Increase in the volume of the nerve itself, occasioned by congestion, should also be taken into account. This slow facial palsy is always slight, and its prognosis is always favorable. In case the diagnosis of fracture of the petrosa is held in suspense, the appearance of slow facial palsy makes it possible to affirm the existence of fracture.

### Etiology of Vulvo-vaginitis in Children.

At the meeting of the Second Congress of the German Gynecological Society, at Halle, May 26, 1888, Dr. Pott, of Halle, stated that among 18,074 children treated by him from April, 1876, to April, 1888, there were 8,481 girls. Of these, 86 suffered with vulvo-vaginitis. The numbers corresponding with the periods of life were as follows: Up to 5 years of age, 56; from 5 to 10, 23; from 10 to 15, 7. The origin of the affection, he said, was partly referable to local causes (such as uncleanness), and to skin-eruptions, such as herpes, eczema, impetigo; and partly to dyscrasia, acute exanthemata, tuberculosis, scrofulosis, or syphilis. The oxyuris vermicularis was also a frequent cause. But these causes can, according to Pott, only be occasional; generally, he believes, there is a specific transmissible disease. He has observed cases in which several children of the same family were affected, in which the mother and father were affected at the same time. The father had, in this case, either suffered with gonorrhœa before, or was at the time suffering with it. Epidemics occur in hospitals, and even in boarding-schools. Cases in which defloration was the way of infection were rare. He mentions that in many countries the superstition prevails that a man infected with clap can be cured if he have intercourse with a virgin. Dr. Pott is of opinion that the poison of gonorrhœa is the sole cause of vulvo-vaginitis. Both he and others have demonstrated gonococci.

Children, he says, acquire clap (1) directly through coitus, or contact with a penis when there is a gonorrhœal urethritis; this must occur rarely. (2) Infection may occur in the passage of the child through the vagina at birth. This must be rare, though he says it is possible; blennorrhœa would occur much more easily. After birth, in the first days of life, children acquire clap from the infected finger, from sponges, from linens, or the child may get it by sleeping with its parents, if they have it; through contact with soiled bed or body linen; children handle and play with their sexual organs, and in this way the child may infect herself. Again, several children may sleep together, and in this way reciprocal infection occur. He does not think that vulvo-vaginitis is a symptom of syphilis, but admits the possibility of a double infection being present in the same case—congenital syphilis and acquired gonorrhœa. As to treatment, he advises corrosive sublimate and iodoform.—*Deutsche med. Wochenschrift*, July 26, 1888.

### Acrania.

Dr. J. F. Lockwood, of Batavia, Ill., reports, in the *New York Medical Record*, August 18, 1888, the following case: "Mrs. S—, a native of Sweden, primipara, gave birth to an acephalic female child. It was still-born, and there was no response to the artificial efforts, yet quickening was felt to the last by the mother, and I myself, while manipulating, felt muscular effort on the part of the child. It seemed to be at full term, *i. e.*, otherwise fully developed. The peculiar features of the case were as follows: First, as to the conduct of delivery. I could not feel the parts of the child with my finger in the vagina, although the os was well dilated and the bag of waters was prominent and easily ruptured. The amount of amniotic fluid was very great. After the rupture of the membrane, the breech presented and was delivered at the end of four or five hours. The cord was coiled once around the right leg, just above the knee. I anticipated trouble in delivering the head, but found no opposition to its passage, for this stage was soon completed, and the explanation came with it. There was no skull and no scalp. The hemispheres were small and unprotected, and the outer integumentary covering to the spine was also lacking. I suppose the removal of the pressure from the exposed and partly-developed cerebrum was the cause of death."

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CHARLES W. DULLES, M.D., EDITOR.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

## YELLOW FEVER.

Amid the alarm and distress caused by the present outbreak of yellow fever at Jacksonville, Florida, it would be well, we believe, for medical men to exert themselves to allay the fears of their fellow-men as much as possible. When this disease breaks out, the number of its victims is increased by panic and lessened by calmness and common-sense. Yellow fever is an infectious disease and not a contagious one. There is evidence enough that all persons exposed to the conditions which give rise to it are liable to contract it; but there is no good evidence that those who are at a distance from the place where these conditions exist are liable to contract it from persons already suffering with it, or from clothing or other fomites. Persons who have had experience in yellow fever epidemics are generally agreed that the disease is not contagious in the true sense of the term, and

it is important that medical men should not allow this fact to be lost sight of. Unfortunately, however, we cannot see much evidence that this view is held by some who might use it with the greatest effect. As an illustration of our meaning, we would refer to what is now going on in connection with the U. S. mails. Under order from the proper authorities, the letters coming from Jacksonville are now subjected to what is called a process of disinfection. This process is utterly useless, if it is regarded as a process of disinfection, and furnishes a wonderful example of the absurdities sometimes practiced by health authorities. If the futility of a process of disinfection is recognized by those who have ordered it, it can be justified only on the ground that it is intended to allay the popular dread of yellow fever. But it would be far better, in our opinion, to teach the community that there is no reason to believe that yellow fever can be communicated by means of a letter, than leave them in error on the point, and dupe them with a show of disinfection, the holowness of which is in danger of exposure at any moment.

It is to be hoped that the present outbreak of yellow fever will yield some useful fruits of knowledge in regard to its nature and operations, and that those who are bravely combating it will be able to clear up certain points which are still confused in the minds of medical men. Among these points none is more important than the mode of its communication; and we heartily wish that those who can speak from personal observation would unite to impress on the minds of the community the fact that yellow fever is not a contagious disease, and that those officials who have charge of the public health would shape their protective measures so that they would not lend support to the erroneous view that it is contagious. This, we think, would do more good than all the fumes of sulphur, or the detonations of artillery, with which medical men or the laity may endeavor to stay its devastating march.

### PREVENTION OF CONCEPTION.

There is no subject in the wide domain of medical practice which is of more general interest in civilized lands, or which demands more discretion in its consideration, than the question of the propriety of preventing conception in the state of wedlock. In most English-speaking countries, this subject is rarely discussed, and, when it is discussed, this is done with considerable misgiving as to the opinion in which not only the argument but also the arguer will be held by wise and conscientious men and women. This misgiving is a sort of testimony to the comparative chastity of English-speaking countries; but it is possible that it is somewhat exaggerated, and that even so delicate a subject may be regarded with too much timidity by those whose duties often bring them face to face with disagreeable and even dangerous situations.

No medical man of any experience can fail to know that the propriety and feasibility of preventing conception engages, at some time or other, the attention of a large proportion of married people in civilized lands, and there is danger that an undue dread of discussing it frankly in medical circles may deprive medical men of the means of properly directing a disposition which cannot be ignored, and which, in the present state of human nature and civilization, it seems impossible to eradicate.

The arguments of the disciples of Malthus for restricting the number of children in a family, and of those who accept part of his opinions, although they reject others of them, are founded principally upon economic considerations. But there are other considerations which deserve to be entertained. Among these are some which have been either hinted at, or openly stated, in certain of the contributions published in the *REPORTER* during the past twelve months, on the "Conjugal Question." The hardships alluded to in those papers and letters devolve upon women as a direct consequence of the practice of monogamy, and are part

of the price paid for its manifest blessings. One of these hardships is the liability to too frequent child-bearing. This is perhaps the most serious reason why such complaints are made of the excessive indulgence of the sexual appetite by men, as were communicated to the *REPORTER* last year. It is not because women have no corresponding inclination to sexual intercourse in itself which makes many of them regard it as a burden or a curse, but because they can rarely rid themselves of the dread of its consequences. To them it always means the possibility of pregnancy, of months of discomfort and often of shame, of the perils of child-birth, of the cares and anxieties of motherhood, and of burdens and responsibilities which are at best only shared by the men. The mere economical considerations which have seemed to many thoughtful men sufficient to justify restriction of the number of children born in wedlock have less weight with women, but the dangers and discomforts of which we have just spoken are, with rare exceptions, ever in their minds, and the question of preventing conception is one which demands chaste, to be sure, but also fearless, consideration as an act of humanity to those who, in our day, bear too large a share of the curse of Eve.

Besides this, however, the limitation of child-bearing is a matter which has an incalculable bearing upon marital and family felicity. The woman who lives in dread of her husband's sexual appetite cannot satisfy him as a wife, and, with this poison in her life, must find it hard to be a kind and wholesome mother to her children.

It will not do to cover up such a state of affairs with euphemisms. Those who know what goes on in the privacy of many a home, as physicians only know it, know that the dread of pregnancy and child-bearing has wrecked the peace of thousands of households, and led to steps of desperation where those who knew less about it never suspected them, or were utterly ignorant of their motive.

Impressed with this fact, we invite our readers to discuss in these pages, as wise and thoughtful physicians, the importance of the prevention of too frequent conception. Opinions may differ as to what constitutes too frequent conception, or as to the desirability of interfering at all with the course of nature in sexual matters, but we believe that a candid study of the subject is an urgent need of the present day, and hope that the REPORTER may do something toward meeting this need, difficult and delicate as the task may be.

#### TREATMENT OF GENERAL PERFORATIVE PERITONITIS.

The progress that has been made in the last ten years in the knowledge of inflammatory disease in the region of the cæcum is most gratifying, and there is reason to believe that, in the near future, differential diagnosis and treatment, as applied to diseases in this region, will be based upon well-recognized and satisfactory data. It is not our purpose at this time to discuss the radical differences of opinion among operating surgeons as to the proper time and character of the operation for perityphlitic abscess. This difference of opinion, we think, is largely due to conflicting views as to the morbid anatomy of these abscesses, as to whether they are properly classed as cases of circumscribed purulent peritonitis or of true abscess located external to the parietal peritoneum. With regard to a different though allied class of cases, where general or rapidly-spreading peritonitis follows perforation of the appendix or cæcum, or the rupture of a perityphlitic abscess, with the escape of pus within the cavity of the peritoneum, there appears to be general unanimity of opinion. The prognosis of these cases under medical treatment is fatal, and it is only by prompt resort to abdominal section and proper treatment of the conditions found that any reasonable hope of recovery can be offered. The first abdominal section for peritonitis due to non-

traumatic perforation of the stomach or intestines was done by Mikulicz in 1880, and reported in 1885; and Weir, in 1887, was able to collect only fourteen additional cases. The operation, from this indication, is but applying to intestinal surgery the rule which has been followed by gynecologists since Thomas Keith had the courage to operate with success, during the course of a purulent peritonitis, and remove the cause—an ovarian cyst, in which suppuration had been set up by tapping; or extending to spontaneous perforation of the intestine that treatment which is universally conceded to be demanded in traumatic perforations of the bowel.

The recent successful case of Sands, reported in the *New York Med. Journal* of February 25, 1888, brings up this subject anew; and the fact that Sands, well known as an opponent of early operation in perityphlitic abscess, strongly urges the necessity of early resort to laparotomy in perforative peritonitis is at least worthy of consideration. The question as to whether median or lateral section is best in these cases is still debatable. The greater ease with which the median section can be made, the less amount of hemorrhage, and the advantages offered for draining Douglas's cul-de-sac would influence most operators; but, should tumefaction in the region of the appendix be present, indicating circumscribed collections of pus in addition to the general peritonitis, the lateral operation would probably offer superior advantages. Perforations of the cæcum should be closed by Lembert sutures. The same treatment is applicable to perforations of the appendix, but preferably this worse than useless organ should be amputated. This has usually been done by ligating it and cutting it off. It would seem better to close the lumen of the stump by Lembert sutures rather than to use the ligature. Other operative treatment of the bowel will seldom be indicated. After the closure of perforations, the sheet-anchors of success will be free irrigation

and drainage. Valuable time should not be wasted in too vigorous sponging. Perhaps Senn's hydrogen-gas test will prove useful in some cases when an examination of the appendix and cæcum fails to demonstrate perforation.

#### PHYSIOLOGY AS SHE IS WROTE.

There lies upon our table a little book which has such an appearance of having been published with a commendable object, that we trust the author will forgive us if we use it to point a moral which we believe to be of importance. At the same time, we trust that our readers will see that our desire to make the book of service in a different way from that which the author intended does not require that we should expose his person as well as his work to the gaze of others.

In the REPORTER, April 21, 1888, we called attention to the amusing errors of a translation which had been offered for publication in this journal, but the book before us presents more numerous and as amusing errors by one who wrote in his native tongue.

Since Mark Twain brought again to notice the little "English as She is Spoke," we have seen nothing to compare with this. It appeals to physiologists and physicians; to printers and proof-readers alike. Every page is studded with typographical and grammatical blunders, which are only equalled by the errors of the text, considered scientifically. An author and a publisher so admirably matched are rarely brought together for our delectation. Nouns singular are more commonly given verbs in the plural (or *vice versa*) than not.

The possessive case was evidently never heard of by either author or proof-reader. There is the most wonderful use and disuse of capital letters—and the abbreviations! The author intended helping us out by prefacing the book with a list of abbreviations, but he tabulated only a small portion of those used. However, we should be glad to know that, in the body of

the work, M. O. stands for "Medulla Oblongata"; P V for "Pons Varoli"; C. S. for "Corpora Striatum"; C C for "Corpus Colosum," etc., etc. But what lexicon will help us out with such a sentence as this: "The P—C— are the articular C— of bone, the *Costal* C—, of the Larynz and the Nose. White Fibro Cart— has matrix converted in part into white fibrous tissue. This W. F. C— are the interarticular cartilages, etc."

A new hint is given the surgeon in the explanation that Torticollis is "rye neck," and horsemen will hereafter profit by the suggestion that "in the horse the presence of pigment in the hoof is an evidence of sagacity, such an animal being trained more easily than one having light hoofs." We have been puzzled to know how the "auricular ventricular opening" could be "closed by a spinster motive." (The word *sphincter* has been a great *pons asinorum* for author and proof-reader, *e. g.*: "The mammary glands are contracted by a spinster muscle at the nipple, which muscle has the same relative function as the spincer aui.") The following sentence may interest physiologists: "The diaphragm has a fixed position on the viscera. from which as a center it acts to pull the ribs up and outward, thus enlarging the thoracic space during inspiration. Where there is no diaphragm, the breathing is done by the nearest muscle, namely the abdominal or perineal. When a plaster paris jacket is applied the breathing is done by the perineal alone."

Our author has the greatest fondness for protoplasm, and uses the word on every possible occasion. "Some protoplasm," he says, "is born tied, and cannot break up the proteids, and emaciation results." An explanation of leanness and obesity is entitled "SEXUAL CONDITION. When the sexual condition is aroused, the protoplasm lingers in the region of the genitals, and the animal consequently grows poor. Castration tends to fatten, because the sexual condition is now destroyed. During lactation the

proteids become milk by the action of protoplasm in the mammary glands."

The ophthalmologist will find in this book more amusement than other specialists, though the otologist, the gynecologist, the laryngologist, etc., will not miss their share. For example, we find that "an emmetropic eye is an impossibility," that "the distant point of accommodation" arises from "overrelaxation of the ciliary." "Myopia always becomes worse, you never see distinctly. It is caused by overstimulation of the brain and overcontraction of the ciliary muscle, which makes the lens convex." Astigmatism "may occur in the vitreous humor." Under the head "Eutopic Phenomena," we are told "these are those which occur in the eye." "A line from the *mascula lutea* through the corner constitutes the visual axis," and "a line from the spot of mariot through the corner constitutes the optic axis."

As to the ear, the author says: "The sensual apparatus is the same as in all the organs of sense"; and the "cochlear" is described thus: "The two canals join at the apex of the cochlear so that an insect passing along the one canal cannot return by the other but must return by the same." "The stapedias regulates the amount of air entering the int. ear and prevents injury from pressure." "The cochlear is supposed to be connected with musical notes." "Noises in the air are painful and depressing."

The section on the larynx ("a respiratory passage like the lungs") is particularly rich. We cannot forbear quoting the explanation of whispering when "a person is aphoseate." "He whispers because he cannot take advantage of the resonance in the frontal tissues from which the resonance is derived. Extirpation of the larynx will destroy speech but the lips can be cultivated, and in this way some persons are very skilful, suspending the action of the cords, at pleasure."

In speaking of respiration, we find the curious statement that the "air of Respiration" is divided into "Tidal air, amount-

ing to 20 cub. in. *per hour*; Complimentary, 110 cub. in. *per hour*; Reserve, 100 cub. in. *per hour*; Residual, 100 cub. in. *per hour*," while the explanations of "exophthalmic goitre" and of the pulse are among the wonders of the book.

We might extend our quotations and include what the author calls "a few nervous points"; but we must forbear. Enough has been quoted from this remarkable book to show that something more is needed for one to become a good author than that he should make a book out of notes taken at medical lectures, and attempt to supplement the wisdom of his teachers with ideas which he modestly thinks better than theirs. Except as a source of amusement, this volume has no claim to professional notice; but it may serve a useful purpose if it warns those who aspire to such notice against an error to which the language of Charles Lamb may be applied, who said, of the owner of a certain sort of faculties, that "They seldom wait to mature a proposition, but e'en bring it to market in the green ear."

—The Congress of American Physicians and Surgeons meets in Washington next week. In this connection it is worthy of note that a large number of physicians arrived in New York City, Saturday, September 8, from Liverpool, in the steamship Umbria. Among them was Sir William MacCormac, Chief Surgeon of the St. Thomas Hospital, London, which stands on the banks of the Thames directly opposite the Houses of Parliament. With Sir William, were five other noted English physicians, including Dr. Arthur Edward Durham, Senior Surgeon of Guy's Hospital, London, and author of "The Physiology of Sleep"; Dr. Reginald Harrison, Chief Consulting Surgeon and Lecturer at the Liverpool Royal Infirmary; Dr. William Miller Ord, President of the Medical Society of London, and Mr. Victor Horsley, who has contributed much to the surgery of the brain and spinal cord. Sir William MacCormac says he came here more for rest than anything else, but he will attend the Congress in Washington. Drs. Durham and Harrison became the guests of Dr. Sayre, of New York.

## BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

**HYGIENE FOR BASE-BALL PLAYERS.** By A. H. P. LEUF, M.D., Director of Physical Education at the University of Pennsylvania, etc. 135 pages, 12mo. Philadelphia: A. J. Reach & Co., 1888. Price, 50 cents.

Nothing indicates more significantly the hold which the game of base-ball has taken upon the people of the United States than the amount of literature devoted to it. No daily paper is regarded as complete which fails to chronicle the issues of the daily contests all over the country during the playing season, and magazine articles and books are appearing from time to time to inform the public of the "points" of the game, and players of the principles involved in it. One of the best which we have seen is the one before us, which is intended to give base-ball players scientific instruction in regard to the way in which the various parts of the body act in efficient work. It gives a brief account of the anatomy of the bones and muscles used, a very complete description of the methods employed in modern pitching, and many directions for securing the best results as a player, for avoiding injury, and for treating injuries when they occur. It is written by a physician who is experienced in physical education, and who has, by observation and experience, learned what are the needs of base-ball players. His book may be heartily commended to the attention of all who are interested in our national game, and we believe it is calculated to be of great service to all who take an active part in it.

## PAMPHLET NOTICES.

[Any reader of the REPORTER who desires a copy of a pamphlet noticed in these columns will doubtless secure it by addressing the author with a request stating where the notice was seen and enclosing a postage-stamp.]

**THE ORTHOPÆDIC TREATMENT OF PARALYSIS OF THE ANTERIOR MUSCLES OF THE THIGH.** By A. B. JUDSON, M.D., New York. From the *Medical Record*, February 4, 1888. 8 pages.

**DERMEPENTHESIS; ANIMAL SKIN-GRAFTING.** By G. F. CADOGAN-MASTERMAN, M.D., Stourport, Wales. 7 pages.

**VESICO-VAGINAL FISTULA.** By REUBEN A. VANCE, M.D., Cleveland, Ohio. From the *Cleveland Medical Gazette*, February, March, April, and May, 1888. 35 pages.

**FIFTY APHORISMS IN PREGNANCY.** By E. J. KEMPF, M.D., Jasper, Indiana. From the *American Practitioner and News*. 16 pages.

**CERTAIN FACTS REGARDING FERTILITY, UTERO-GESTATION, PARTURITION, AND THE PUERPERIUM IN THE SO-CALLED "LOWER" OR "LABORING" CLASSES.** By GEORGE WOODRUFF JOHNSON, M.D., Washington, D. C. From the *Amer. Jour. of Obstetrics*, May, 1888. 19 pp.

—This pamphlet of Dr. Judson's is principally occupied in describing an ingenious and very simple form of splint which he has designed for cases in which involuntary flexion takes place at the knee-joint as a result of infantile paralysis of the extensor

muscles of the thigh. The simplicity and cheapness of the apparatus recommend it strongly to professional favor, and its utility seems to have been demonstrated in Dr. Judson's practice.

—Dr. Cadogan-Masterman, having experienced the difficulty of obtaining suitable human material for skin-grafting, tried, in January, 1885, the effect of using the skin of the rabbit for this purpose. The result, an entire success, and he has now used this material in four cases, and recommends its adoption by other surgeons. From his experience, he thinks the skin of the young wild rabbit the best for the purpose, and he maintains its vitality by the application of moist heat after its application. His method was so successful in his hands, and seems to be so rational, that we hope to be able to present it in full to our readers shortly.

—The writings on vesico-vaginal fistula are not yet quite as numerous as the sands of the sea, but they can hardly be called few; still, a paper as carefully prepared as this of Dr. Vance, and bearing so many marks of intelligent observation and skilful practice, will always be welcome. His pamphlet contains an excellent description of vesico-vaginal fistula, as a lesion, and the form of operation best adapted to cure it. The clear descriptions of the text are admirably supplemented with illustrations, and the whole would be a valuable addition to the library of any physician.

—Dr. Kempf's fifty aphorisms are sensible and calculated to be useful. As he invites dissentients to express their opinions, we may say that some experience inclines the writer to question the advisability of "hardening" the nipples during pregnancy with an astringent solution, and to prefer softening them with some simple emollient. Again, while we cannot gainsay the truth of his fifth aphorism, we think it would be easy to abuse the permission it grants, and would suggest that this may not be stretched without great danger of bringing on an abortion.

—Dr. Johnson's paper contains a very interesting study of the conditions he found in three hundred women belonging to the laboring class, in reference to the exercise of the procreative function. The facts he notes indicate that certain notions commonly entertained in regard to women of the laboring class are erroneous. For instance, that they are usually fertile and prolific above well-to-do women, and that they suffer more than the latter from lacerations and other injuries of the genitalia during labor. Other important generalizations may be made from his address, which deserves the careful attention of all who are interested in its subject.

## LITERARY NOTES.

*Harper's Monthly* was the pioneer among magazines which developed the art of engraving to the high point which it has attained in America. This development has now gone so far that it is hard to see how it can be carried any further. A glance over recent numbers of *Harper's Magazine* shows the most wonderful advance from the productions of the graver in earlier years, and furnishes most interesting evidence of the progressive character of its literary contents. It is saying a great deal to say that it maintains its position in face of the intense competition of some of its rivals, and still stands at the head of the illustrated magazines of America.

## CORRESPONDENCE.

### Strongulus Gigas.

TO THE EDITOR.

Sir: I have been very much interested in the case of "*Strongulus Gigas*" published in the REPORTER of August 25, and suspect it is open to an interpretation different from that given by the writer. As he says, such cases are of extreme rarity, so much so that it is doubtful if any genuine case of the occurrence of this parasite in man has been recorded. The *strongulus gigas* as found in animals is much larger than the supposed worms in the present case, attaining a length of three feet. In this case, the enormous size of the right kidney—weighing two and one-half pounds, its resemblance to a fatty kidney, but with no trace of kidney tissue, together with a similar change in the other kidney and the liver, point unmistakably to new growth, perhaps carcinoma. The "worms," according to this view, were blood-casts, such as are passed frequently by patients similarly affected. During the past winter, several such specimens were exhibited before the Philadelphia Pathological Society, one set, if I mistake not, from a case of carcinoma of the kidney.

Hoping this may throw still more light on the subject, I am

Yours truly, GEORGE DOCK.

Manayunk,

August 26, 1888.

### Herpes Ophthalmicus.

TO THE EDITOR.

Sir: When reading the account of Dr. Wheelock's case of herpes ophthalmicus, in the REPORTER, December 3, 1887, page 752, I was struck with the similarity of symptoms and sufferings to those experienced in my own person. Though the disease is common here, I had never seen a similar case, nor could my associates remember one; and, when able, I intended to report it. Professor Wheelock's patient was ten years younger than I am, and was a robust man; but, if his sufferings were intolerable, mine were more so, as, during one of my paroxysms, my family thought me past reanimation.

Most authors treat of herpes too superficially; one who has not experienced an attack cannot appreciate its gravity. When it occurs over the cardiac region, death, in my experience, supervenes on or about the fifth day. I have two chronic cases whose duration exceeds over twelve years, and

whose neuralgic pains and itchings I cannot relieve. I am using antipyrine, recommended by Dr. Germain Sée, before giving it to my patients.

On April 25, 1887, I felt, on awakening, slight nervous twitchings, branching out from a small dry point on the left upper lid; the twitching was just enough to attract attention. The spot resembled those produced by the exudate of the "matta," an insect pest prevalent at that period of the year. I paid no attention to it during the day. The next morning, my daughter noticed two fine white pimples. The day was passed with an occasional twinge of pain, augmenting in the evening, and branching out over the forehead and temporal region. The next morning, the eyelids were red and swollen, the eye injected; the pain was intolerable, and an eruption extended over the head, face, lips, and into the mouth. There was no eruption nor any inflammation to the right of the median line. There were paroxysms of pain in which the pain extended down both arms to the tips of the fingers; down the spine to the lumbar vertebræ, thence to the toes of both feet, causing numbness. This was succeeded by a pricking sensation, which disappeared under the use of friction. The arms were longer than the other parts of the body in returning to a normal state.

On the sixth day, the viscid serous exudate from a few large pimples, mostly confined to the hairy scalp, lips, and mucous membrane of the upper part of the mouth, had an offensive odor characteristic of the disease; one pimple on the lid was elongated, and, on the eighth day, had formed a thin dark crust, depressed below the surface, and, like the rest, was very tenacious and leathery: it was detached on the twenty-fifth day, with scissors. The face and forehead were covered with fine pimples, which were crusted on the twelfth day. From the eighth to the sixteenth day, the paroxysms numbered ten or twelve in twenty-four hours; then they abated to four or five, disappearing on the twenty-fifth day. They were succeeded by very small ones; when falling asleep, they were still felt, but not every night; they did not pass beyond the fingers. No sensation was felt in the spine, as at first.

The eyes continued to suppurate until late in August. Suppuration was followed by a viscid exudate, continuing until late in February. This was in turn followed by a watery exudate, lasting until May and being sufficient to glue the eyelids during sleep.

The latter still continues, but is about disappearing. A deposit of lymph that covered the cornea was gradually removed by molasses, dropped in twice daily. (Highly recommended to me by Dr. V. Mott, in 1847.) Adhesions were removed by alternate use of eserine and atropine. Eyelids feel stiff, vision is incomplete, owing to a barely perceptible turbidity in the anterior chamber, which prevents me from reading any print.

At first I used cocaine liberally and also solution of boric acid. Iodide of potash was used to mitigate the pain, with slight benefit. Quinine and the most noted tonics were also used, together with electricity, which is being repeated. As Drs. Mabano and Barrios early gave up all hope of saving the eye, I adhered for a long time to the use of powdered boric acid, together with a solution of the same as an antiseptic, and have saved the eye, although it still troubles me. Now, if you can suggest anything to relieve the *itching*, I think the sight might be relieved immediately after.

Yours truly,

EARL FLINT, M.D.

Rivas, Nicaragua,

August 7, 1888.

## NOTES AND COMMENTS.

### Urethral Discharges.

At the meeting of the Ontario Medical Association, June 13, 1888, Dr. Grasett read a paper on urethral discharges (*Canadian Practitioner*, July, 1888). After referring to the frequency with which such cases are met and the depressing mental effect the condition often has upon the patient, he divided the subject into sections, according to the nature of the discharge. 1. When the discharge is the result of a catarrhal condition of the urethra—urethritis. This urethritis may be: (a) Simple. such as that set up by leucorrhœal discharge, excessive or violent coition, or mechanical irritation. This is usually less severe and of shorter duration than (b) specific urethritis or gonorrhœa. Whether or not this specific inflammation is always due to the presence of gonococci, cannot be regarded as proved. Experiments have failed to establish that it can be induced by injection into the healthy urethra, and it has not been found possible to inoculate animals with gonococci. Notwithstanding these facts, the almost constant presence of gonococci suggests that they are possessed of causative properties.

The plan of treatment found to be most useful might be summarized as follows: Rest in bed; cleanliness, secured by frequent passage of urine, or by injecting hot water. The patient should be instructed to allow the penis to hang in a natural position, so as to permit the discharge to run out; or a dressing of salicylic gauze might be placed loosely over the end of the penis and covered with a rubber bag. The diet should be light and unstimulating; alcohol and tobacco must be avoided. Alkalies may be given, to keep the urine neutral or slightly alkaline. Injections, except of hot water, are harmful in the first or acute stage. The injections frequently given by chemists do great harm. In the late stages, sulphate and sulphocarbolate of zinc are beneficial in dilute solutions; so, also, is nitrate of silver.

2. Chronic discharge or gleet sometimes persists after an attack of gonorrhœa, in spite of treatment, both internal and external. An error in diet, or indulgence in alcohol or tobacco, will often cause a return to the catarrhal stage. The pathology of gleet probably depends upon the fact that the inflammation, which commences in the mucous membrane, spreads to the submucous tissues, and causes a thickened and granular condition of both. If a stricture is present, it should be dilated. The injections used should be mild and slightly stimulating astringents, and should be frequently changed. Caspar, of Berlin, recommends a combination of mechanical and chemical therapeutics. He uses nickel-plated bougies with grooves, into which he pours a medicated paste, which melts when the bougie is inserted into the urethra. He has used iodoform, zinc, resorcin, and other drugs, but has had the best results from the use of this formula:

Olei theobromæ . . . . .	100	pts.
Argenti. nit. . . . .	1-1½	"
Bals. copaibæ . . . . .	2	"

No bad effects have been noticed. Improvement begins at once, and the discharge, under the microscope, soon shows a diminution in the proportion of pus-cells.

3. Prostatorrhœa was first accurately described by Dr. S. W. Gross, of Philadelphia. It consists of a clear glairy mucus from the prostate, most frequently seen after straining at stool. It comes from the acini of the gland, and is increased in quantity by disease of the rectum, masturbation, hard riding, etc. Several instances of this condition were cited, illustrating the good results which followed treatment by tonics and the local use of nitrate of silver.

4. *Spermatorrhœa*, or flow of semen, unaccompanied by sexual excitation or orgasm, is used by quacks and empirics to include nocturnal emissions, which, unless excessive, are an indication of health rather than of disease. If, however, they become too frequent and are followed by depression, they are pathological. The causes are, among others, hyperæsthesia, or irritation of the genitals, inflammation of the prostate or urethra, phimosis, etc. The treatment should be largely hygienic. Avoid alcohol and tobacco, empty the bladder the last thing at night and first thing in the morning, give light diet, keep the bowels loose, and abstain from irritating exercises, such as riding on horseback. Bromide of potash often acts beneficially. If the prepuce is long, circumcise it; if there is rectal irritation, as piles, fissure, etc., appropriate treatment must be applied for them. Passing large bougies, and the local application of nitrate of silver, gr. x or xx to one ounce, are also useful. The depressed mental condition of the patient must not be neglected, as very much depends upon his intelligent co-operation in the treatment.

#### Use of Creoline as an Intestinal Antiseptic.

Dr. Hiller, of Breslau, in a communication in the *Deutsche med. Wochenschrift*, July 5, 1888, recommends creoline as an intestinal antiseptic and parasitic. Promptness and certainty of action, freedom from danger in that it does not act either as a poison or as an irritant when taken internally, make creoline, he says, the ideal antiseptic for diseases of the stomach and intestinal canal. Dr. Hiller has observed the good effects of creoline in meteorism of whatever cause—stenosis of the bowel, typhilitis, enteritis, habitual atony of the bowel, with constipation, and typhoid fever. The same never-failing action was demonstrated in flatulence, which accompanies acute and chronic colitis, in the fulness and swelling of the epigastrium after food, as a result of disturbances of gastric digestion, and especially in the putrid decomposition of the contents of the bowel in chronic enteritis and colitis. Colitis, likewise, when creoline is used, combined with washing out the stomach, accomplishes brilliant results in dilatation of the stomach, as a result of stricture of the pylorus, overcoming the development of gases and the distressing symptoms occasioned by them. Its prompt and certain checking of the processes of

fermentation is also proved in acute catarrh of the stomach, in simple diarrhœa, and in cholera morbus. Hiller employed creoline in doses of from  $4\frac{1}{2}$  to 15 grains, generally given three times a day, after meals. On account of its bad tarry taste, he gave it only in strong gelatine capsules. He regards the administration of creoline, as indicated in dysentery, both internally in doses of  $7\frac{1}{2}$  to 15 grains, three times daily, and in the form of clysters, of a strength of 15 or 45 grains to 16 fluid oz.; also in carcinoma of the rectum, as a wash, and in cholera morbus and cholera nostras. He suggests its use in Asiatic cholera. Hiller has also employed creoline in one case of *tænia solium*, and in one case of *oxyuris vermicularis* (15 grains in gelatine capsule, three times a day) with prompt effect. He says that the drug cannot be employed in practice among children, because it can be taken, in sufficient doses to be active, only in gelatine capsules. In larger children, small capsules containing from 1 to  $1\frac{1}{2}$  grains, preferably with honey, may be given.

#### Hysterical Spasm of the Œsophagus in a Young Child.

Dr. B. D. Foster, of Chicago, in a letter to the *Medical Record*, July 21, 1888, says: "I was called one day in great haste to see Mary C., ten years of age, who was said to be choking to death, and found her complaining of great pain in her throat, which she was grasping and begging her mother to rub for her. The mother, attributing the trouble to 'a worm in her throat,' was vainly endeavoring to pour down a dose of Jayne's vermifuge. The child was unable to swallow, the fluid regurgitating into a handkerchief held in front of her mouth. I immediately administered a hypodermic injection of morphine sulph., gr. one-sixteenth. Although complaining bitterly of the pain induced by the fluid being forced beneath the skin, her face immediately assumed a happy expression, and she laughingly declared she was cured the instant the needle was withdrawn, and, obviously, before the solution could have been absorbed. In a few minutes she was laughing and playing in her usual health. The history showed that her mother had been subject to various neuroses (supposed to be hysterical), and that two other relatives were idiotic or imbecile. I diagnosed hysterical spasm of the œsophagus. The youthfulness of this subject, and the immediate relief afforded by the prick of a needle, are not entirely devoid of interest."

### The Time of Death.

While Dr. Munk's charming little book upon Euthanasia is still fresh in our memory, it is curious to note, says the *Lancet*, July 14, 1888, that M. Brouardel has been recently lecturing upon the precise moment of death, considered from a medico-legal point of view. It is with a feeling of some surprise that we learn that he wholly rejects as signs of death both cessation of respiration and arrest of cardiac pulsations. The most recent observations upon a decapitated body showed that cardiac movements persisted an hour after the head had been severed, and on these grounds, as well as on account of the temporary arrest in fainting, he holds that the cardiac movements afford no certain criterion for gauging the precise moment of death. That the spinal cord has comparatively little influence upon the heart's action was well shown by experiments upon two dogs; the one was completely decapitated, in the other only the soft parts of the neck were divided, and yet the time that elapsed before cessation of cardiac movements was practically the same under both conditions.

### Elixir of Theine Hydrobromate.

Mr. J. W. England, of Philadelphia, at the meeting of the College of Pharmacy, May 15, read a paper on theine, in which he states that, of all the possible salts of theine—the term is here used synonymously with caffeine—the hydrobromate would, he says, seem to be the one whose chemical character would most consistently give the best therapeutical action. The sedative alkaloid theine, being in combination with the sedative hydrobromic acid, the action of theine hydrobromate should be doubly happy. He admits that the percentage of the acid is small, but, all things being equal, thinks it should, theoretically, be the best. Reasoning on this basis, Mr. England constructed an elixir of theine hydrobromate, which was tried medicinally, and the results obtained would seem to justify the highest expectations formed in regard to it. The formula used is as follows:

Take of:	
Theine . . . . .	3 iss
Dilute hydrobromic acid . . . . .	13 i
Water . . . . .	13 i
Elixir of orange . . . . .	q. s. ad Oi.

Dissolve the theine in the water and hydrobromic acid with the aid of heat, filter, and add the orange elixir. Dose: 1 to 3 teaspoonfuls. The product is a clear, transparent, water-white liquid; pleasantly

bitter in taste; almost neutral in reaction, miscible with an equal volume of alcohol without precipitation. Each teaspoonful contains one grain of anhydrous theine hydrobromate ( $C_8H_{10}N_4O_2 \cdot HBr$ ).—*American Journal of Pharmacy*, June, 1888.

### Abscess of the Liver, due to Actinomycosis.

The *Lancet*, June 30, 1888, states that a patient, a commercial traveler twenty-five years old, who had never been abroad and had enjoyed good health, and who was suffering from actinomycosis, was recently under the care of Dr. Payne, in St. Thomas's Hospital, London. He first complained of severe pain over the front of the right lower ribs, three days before admission, which was on May 4. The pain was worse on coughing or breathing, and on attempting to lie on his left side. The hepatic dullness extended upward to the fifth rib in the nipple line, but the lower border could not be felt below the ribs. There was a little albumin present in the urine, and he suffered from slight cough, with expectoration. The cough and expectoration became less, but the pain continued severe, and was subject to exacerbations. The temperature, seldom below  $100^\circ$ , generally rose to  $102.2^\circ$ – $103.6^\circ$  daily. About May 20, slight bulging of the right lower ribs, in front, was noticed, and there was a little friction audible over the fourth interspace close to the sternum; dullness reached to the fourth rib at the nipple. On the 23d, thick pus was withdrawn with a hypodermic needle at a depth of about one inch and a half, in the sixth space, about in a line with the nipple. On the 26th, Mr. Battle cut down in this space and stitched the diaphragmatic pleura to the costal pleura, opening the abscess four days later. Full antiseptic precautions were taken. About four to five ounces of thick pus were evacuated. In a few days the pain was relieved, and the temperature, on the whole, became lower; but on June 1 the temperature rose to  $103^\circ$ , with rapid breathing, and there were signs of fluid in the right pleura, with delirium and vomiting. On the 6th, the pleura was aspirated, and forty-nine ounces of purulent fluid removed. The patient died on the following day. At the autopsy, made by Dr. Hawkins, there was a small emptied cavity in the liver, with surrounding deposits of actinomycosis; empyema on the right side, having no communication with the wound leading to this cavity; and purulent pericarditis. The other organs were healthy.

# The Emperor and the American Physician.

Of the late Emperor Frederick, it is told by the New York *Post* that, while he was in London for the Queen's jubilee, Sir Morell Mackenzie introduced a noted American doctor to him. After a careful examination of his throat, the imperial patient, in his usual cheerful manner, inquired: "I suppose an imperial throat is very much like that of other mortals?" "Well, sir," came the quick reply, "we will try and make it so, at any rate." The then Crown Prince thoroughly appreciated the quick Yankee wit, and, striking his broad chest, said: "But this is all right, is it not?" The Yankee gravely looked the splendid proportions of the illustrious patient up and down, and then deliberately drawled out: "As for the rest, sir, you would make a good American." Fritz's merriment was great, but the German doctors present were aghast at such levity.

## Influence of Nicotine upon Pregnancy.

At the recent meeting of the Society of Practical Medicine of Paris, July 12, 1888, M. E. de Pradel said that he recently had had a patient who, since her eleventh year, had been engaged in a tobacco manufactory, and who, within three years, had had one abortion at two months and two premature labors at eight months, the children presenting signs of having been macerated for several weeks. Not finding any signs of syphilis in the husband or wife, he asked himself if the cause could be a certain degree of poisoning with nicotine. In spite of divergent opinions of writers, he felt called upon to advise the patient to quit her work in tobacco for good. He says he is induced to believe in nicotine as a cause of abortion from the case related by M. Quinquaud, in which a patient who had had three abortions during her stay in a tobacco manufactory, after giving up her work there had three healthy children.—*Bulletin Medical*, July 15, 1888.

## Philadelphia Polyclinic.

The Philadelphia Polyclinic has had a larger summer class of physicians in attendance this year than in any previous year. The prospects of this institution, the only one for post-graduate instruction in Pennsylvania, were never brighter. A number of bequests, one of \$5,000, have recently been received. An increase of ward capacity will soon be urgently needed.

## NEWS.

—Dr. A. B. Hirsh has removed from No. 2130 Master Street, to No. 1730 Girard Avenue.

—Dr. Kratschmer has been granted the title of Professor in the University of Vienna.

—Dr. Gaffky, of Berlin, has been appointed Professor of Hygiene in the University of Giessen.

—Ten cases of yellow fever and one death were reported September 7, at Macleny, in Baker Co., Florida.

—A disease said to be dysentery has been epidemic in Presque Isle, Mich. There have been 209 cases and 8 deaths.

—Collections of money are being made in New York and Philadelphia for the yellow fever sufferers in Jacksonville, Fla.

—Dr. Franz Hofmann, Professor of Experimental Hygiene and Director of the Hygienic Institute in Leipsic University, has been made Rector of the University.

—Seventy-seven new cases of yellow fever and eight deaths were reported in Jacksonville, September 7, and forty-four cases and six deaths for the twenty-four hours ending 6 P.M., Saturday, September 8.

—Mr. John A. E. Walk, Superintendent of the Presbyterian Hospital, died suddenly, September 7. He had been superintendent of the hospital since 1871. He is said to have had symptoms of heart-trouble for some time, and seems to have died while engaged in writing a letter to his brother, Dr. James Walk, in which he complained of trouble with his heart.

—The *Med. and Surg. Journal*, September 8, 1888, says: The new wing of the Seaside Hospital of St. John's Guild at Cedar Grove, Staten Island, was recently opened with appropriate ceremonies. It measures 100 by 25 feet, and contains 64 beds, thus increasing the capacity of the Hospital one-half, so that it now accommodates 205 mothers and children.

—During the past few years, according to the *Progrès Medical*, the ranks of the medical profession in Paris have increased terribly. People in 1866, says another French contemporary, the *Paris*, were fortunate, for then only 6,506 physicians, surgeons, and druggists undertook to send them to another and a better world; now 10,360 doctors and chemists look after the Parisians, or sell them physic.

—The Philadelphia *Ledger*, September 8, 1888, says: A man who styles himself a doctor, and represents himself as connected with a mythical eye and ear infirmary in New York, has been selling large numbers of what he calls "electrical spectacles," to persons in cities and towns of New Jersey. He gets a deposit of \$2 on each pair (which he values modestly at \$75 each), to guarantee their return after they have effected a cure, which, he says, will follow a ten minutes' use of them every day for a short time. He doesn't guarantee his own return, however, and in time the victim can see, without the aid of glasses, that he or she is out \$2, less a 25-cent pair of spectacles.

#### HUMOR.

THE ONLY REMEDY.—Doctor, to a *malade imaginaire*: "There is but one remedy that can save you." Patient: "And what is that?" Doctor: "Get your daughter married. You are then a mother-in-law, and they are notoriously very tenacious of life."—*Fliegende Blätter*.

THE UBIQUITOUS NICKEL and slot automatic delivery machine now appears in New York drug-stores, with several slots, each labeled with the name of some common complaint. The nickel having supplied the motive power, a small glass bottle is shot out containing the "appropriate medicine" for the ailment specified.

TAKING THE CHANCES.—"I w-want two g-grains of q-quinine an' four o-ounces of w-whiskey," shivered a man with malaria to the drug-clerk, "an' I'll take it n-now." "Isn't it rather a small dose?" suggested the clerk. "You seem to have got it bad." "I d-don't know but w-what it is. M-make it e-eight ounces of w-whiskey, an' I'll run the risk."—*American Druggist*.

A BOSTON SWELL recently took a trip way down on Cape Cod. He had occasion to drive from the station to his destination with a typical "Cape Codder," one of those keen but not over-brilliant-looking sons of the sea-coast. The Bostonian had noticed, as they rode along, the bleak country, with its uninviting fields and sandy strips of land, and finally said to his companion: "I don't see how you live in this forlorn-looking country. What do you raise down here, anyway?" "Wall," was the drawling answer, "we plant school-houses and raise men."—*Boston Times*.

AN ARIZONA MAN who subscribed for a religious paper some time ago sent a letter

to the editor to stop it, in which he said: "We find *The Gila Howler*, our local paper, much livelier than your old milk-and-water affair. Besides, you haven't played a square game in your 'ads.' My wife bought a pair of the corsets you advertised, and blamed if they didn't burst in three weeks, and we use them now to mend the chicken-coop. I took half a dozen of the 'dead shot' pills you puffed up in a reading-notice, week before last, and the next day I was so sick that all the doctors in the town published bulletins about my approaching death, and the boys said I had the jim-jams. For these reasons I have determined to quit your paper and read *The Howler* only. As I know it always lies, unless it is paid to tell the truth, it can't lead me into temptation."—*American Druggist*.

#### OBITUARY.

##### JOHN LUTHER STEFFEY, M.D.

Dr. John Luther Steffey, one of the most prominent physicians and surgeons of Hagerstown, Md., died recently, in his fortieth year, as the result of an acute attack of dysentery, which had lasted about ten days. Dr. Steffey was born and brought up in Williamsport, Md. After graduation at the Jefferson Medical College, of Philadelphia, in 1870, with high honors, he practiced his profession for a few years. For the last nine years, he resided and practiced in Hagerstown, Md., where his skill as a physician and surgeon was honored and recognized at home and elsewhere. He has performed some of the most successful and difficult surgical operations in that community. He was warm-hearted and kind, possessed a fine sympathetic nature, and always had a feeling of the deepest tenderness toward his more unfortunate fellow-beings. If he had lived, it was his intention to make gynæcology a specialty, in connection with his general practice.

A few years ago, he married the eldest daughter of Mr. William Schlotterbeck, who, with an aged father and mother, four sisters, and five brothers, survives him. His death was sudden and unexpected, and it was a great shock to the entire community. The funeral took place at his father's residence, in Williamsport, Md., on Friday, August 24. He expressed a desire to be buried in the cemetery of that place, overlooking the Potomac River, and his desire was respected. May guardian angels guard his sepulchre and may he rest in peace.